

The Journal of **ELECTRICAL WORKERS** AND OPERATORS

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WASHINGTON, D. C., JANUARY, 1931

NO. 1



I RESOLVE

*1. To be thrifty—and
to begin the New
Year by saving for
the future with a life
insurance policy.*

JANUARY—THE MONTH OF RESOLUTIONS AND THRIFT

The Union Cooperative Insurance Association suggests that **when you start turning over new leaves for 1931, you put an insurance policy on the first page.**

We offer you an opportunity to begin the New Year by saving money for future necessities—security in your old age, your wife's comfort and happiness, your children's education.

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EXECUTIVE OFFICERS

International President, H. H. BROACH,
1200 15th St., N. W., Washington,
D. C.

International Secretary, G. M. BUG-
NIAZET, 1200 15th St., N. W., Wash-
ington, D. C.

International Treasurer, W. A. HOGAN,
647 South Sixth Ave., Mt. Vernon,
N. Y.

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R. R. 3, London, Ont., Can.

Second District CHAS. KEAVENEY
Box 248, Lynn, Mass.

Third District EDW. F. KLOTZ
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Fourth District ARTHUR BENNETT
Box 185, Youngstown, Ohio

Fifth District A. WILSON
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6900 Jeffery Ave., Chicago, Ill.

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Winnipeg, Can.

**TELEPHONE OPERATORS'
DEPARTMENT**

President JULIA O'CONNOR
1110 Tremont Bldg., Boston, Mass.

Secretary MARY BRADY
1110 Tremont Bldg., Boston, Mass.

Magazine Chat

We have often spoken of the drawing power of the correspondence in this magazine. Many readers turn to this first, and some never read anything else. This is but natural, for, all of us are interested in our own immediate problems first.

We took into consideration the pulling power of this section when we decided to make a change-over from one style of type to another in the featured articles. Quite frankly, we did this to place a premium of readability on articles that ought to be, but which may not always be read.

"From quite a distance
This card has come
To wish the workers
Everyone
Who on the Journal
Are employed
Best Wishes, and
Much Christmas Joy."
—BILL, L. U. No. 212.

This thoughtful remembrance brightened our staff rooms at holiday time. Bill, we did have a good Christmas, made significant by yours and many other cards.

An electrical contractor in Pennsylvania takes the trouble to inform us that he is a steady reader of the Journal. Just for luck, he volunteers, "I consider it the best publication of its type in the country."

At the same time, an old member, prominent in Arkansas, declares, "Don't know if you can improve your Worker very much, that is, beyond what it is at present, because it is the best of all that I receive of 12 magazines."

The picture on the cover is used by the courtesy of the Fox Film Corporation; it is from that excursion into the future "JUST IMAGINE." "JUST IMAGINE" was not bald fiction, merely a collection of commonplace facts, in new relations.

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Wide World

ART IRONICALLY GROUPS TYPES

Diplomat, financier, dictator and labor leader.

Rugged Andrew Furuseth keeps company with Herrick, Rockefeller and Mussolini in Sculptor Jo. Davidson's Studio, Paris.





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Modern America Measures Machine Progress

SCIENTIFIC demonstrations as popular as the theatre. That is what has taken place a number of times this winter in New York City, and in other great centers along the Atlantic seaboard. Nightly, thousands have been turned away as engineers from great technical laboratories of big industries performed their modern miracles to breathless audiences inside. The people are infinitely curious about the machines science is creating—machines that are swiftly revolutionizing their lives. Recently when one demonstrator of communication developments appeared in New York City, there were 17,000 requests for tickets admitting to an auditorium seating only 10,000 persons. The requests for tickets indicated that not only scientifically-minded persons wanted to attend, but persons from every walk of life.

It is apparent that America is trying to catch up with itself. So swiftly have new wonders been assembled in laboratories, so sweeping have been the changes they have instituted, the millions who compose the "public" are finding that they can not keep up with the scientific procession. How many readers of this magazine, for example, understand the workings of the following new discoveries:

Hearing without sound,
Invisible microphone,
Artificial larynx,
Inverted speech,
Speaking electric flame.

All of these have had successful public demonstrations by the Bell Laboratories. The fact is, all Americans, not directly in touch with scientific research, are hopelessly ignorant of the rapidly expanding field of inventions.

Tallow Candle Ideas

There is deep social significance in these demonstrations, and in the movement to establish museums of the machine age in the United States. So much of the meaning of machine production is lost upon Americans, and few of them have come to grasp the implications of the machine age. For most of the 150 years of America's national life, we have been an agricultural people, that is, we have lived upon farms and in farm villages and towns. There we came to accept certain definite ideas about ourselves and our collective efforts. Democracy, such as we know it in

The New Year brings many questions, but none more significant than "Where Are We?" No answer can have meaning which does not include machines. Museum of Science and Industry begins great educational movement. Other Museums.

America, is a concept of individualism, and individual rights. This "rugged individualism" may well account for the ease with which hostile bosses can stir public sentiment against the labor movement; for, be it remembered, the labor ideal is a group ideal, and fits more successfully in an industrial civilization than in an agricultural. It may well be that as America becomes "industry-conscious," labor unions will be accepted more hospitably.

At any rate, it is safe to say that our ideas have not kept pace with our environment. Most of us are still in the tallow candle age—intellectually. Most of us think we are rugged pioneers on

the prairies, and not modern cliff-dwellers working for a corporation—that is, intellectually speaking. Most of us imagine we are nearer Daniel Boone than we are to Henry Ford.

How is this gap between our brains and our jobs going to be repaired? By rapid, short-hand, graphic education. This has already been begun in New York and other large cities. The Museum of Science and Industry has recently closed a special exhibit called Men and Machines. This was held in New York in November. So great was the attendance that the exhibit had to be prolonged several weeks beyond the scheduled date of closing.

The Museum of Science and Industry occupies the whole of the fifth floor of the News Building, 220 42nd Street. The News Building (the work of the young architect, Raymond M. Hood) is not just another skyscraper. It has contrived to give character to itself by turning its lower floor into a geographical exhibit. A huge revolving terrestrial globe, illuminated, teaches more about the earth's surface in an hour than eight years in the grade schools. This exhibit is a fitting doorway to the Museum of Science and Industry, though it does not belong to it.

Takes Far View

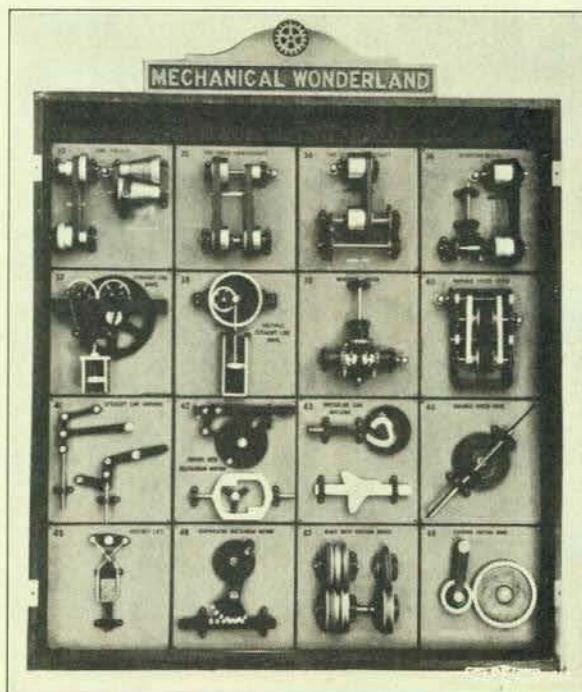
The very first exhibit in the Museum is an effort to "change our minds," to transform our agricultural conceptions into industrial. These panels seek to orient the visitor into the labyrinthian present.

Panel 1. A glimpse of primitive man, living in caves, interested in weapons of war, rather than tools. "Man the only tool-making animal. Without tools, he is nothing. With tools, he is all."

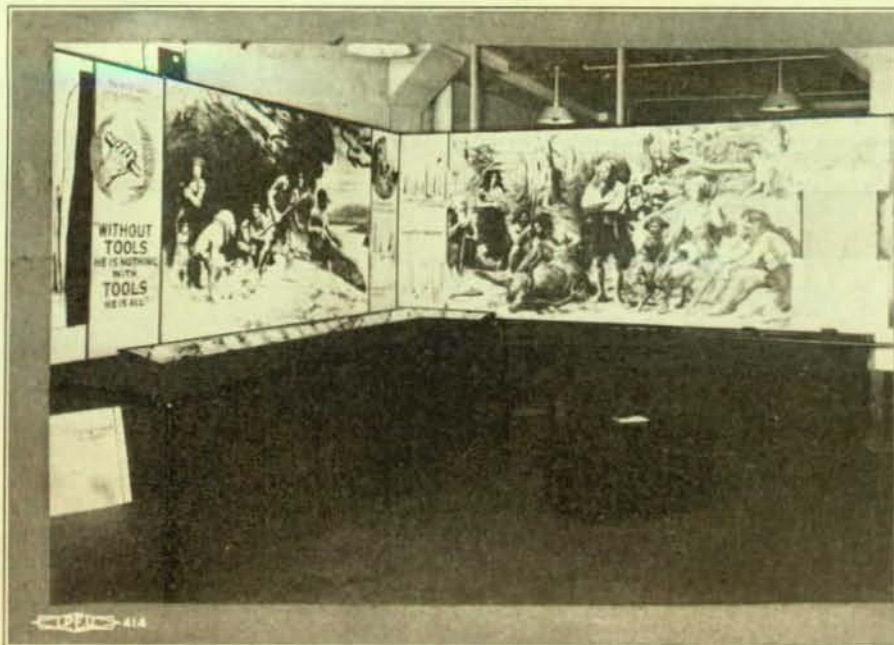
Panel 2. A glimpse into the age of handicraft—a colonial room with spinning wheel, suggestive of the days when most of the industrial arts were followed in the home.

Panel 3. An effort to depict the evolution of industry. First, crude tools. Then "man learns that a draught of air carefully directed against fire gives a flame capable of melting iron." Then is ushered in the Age of Machines. "With iron, man is nearing an unprecedented age."

What distinguishes the museum is life. Think of it, a museum of



A SECTION OF THE 150 FOOT PANEL OF MECHANICAL DEVICES THAT COME TO LIFE WITH THE PRESSING OF A BUTTON.



PANEL 1—THE TOOLLESS AGE PASSES INTO THE AGE OF TOOLS



PANEL 2—THE AGE OF HANDICRAFT

machines, yet it is more vital than a museum of sculpture or paintings. Why? because it moves. The machines operate. They drive ponderously yet smoothly through their intended gyrations. One exhibit furnishes 150 feet of instruction, a panelled wall of basic devices that tend to make the visitor machinery conscious. (On the day I was there, school boys crowded this wall.) Here are cone pulleys, two speed countershaft, irregular cam motors, ratchet lift, heavy duty friction drives, eccentric friction drive—all basic, all illustrated simply, in principle, all operating. They call it "Mechanical Wonderland." It is more than that. It forms elementary grades in the great university of the machine.

Perfection Incarnate

Those who doubt the precision of machined products, should glance at the bouncing balls. Steel balls machined to such perfection, and with such identical perfection, leap out of one hopper upon a steel floor, and bounce with accurate nicety into the throat of another hopper. Back again, and so repeat. A speck of dust upon any one ball will deflect the jumping sphere from its intended course, and spoil the show.

Many exhibits are permanent, all suggestive of machine civilization's honorable past.

Milling machine built in 1818 by Eli Whitney, inventor of the cotton gin.

Model of the boring mill built in 1775 by John Wilkinson, of Bersham—one of the world's first real machine tools. This boring mill made it possible for Wiff to build the steam engine which he had conceived 10 years before.

A Bloew press essentially the same as that used by Benjamin Franklin.

The first Parsons Steam Turbine brought to the United States.

Model of the Salamander—the Mur-

ray locomotive—the first commercial locomotive in the world.

Construction Represented

Electrical workers will be especially interested in the building exhibits. Models of skyscrapers, description of materials, etc.; in telephone and radio exhibits; and in power currents.

A special exhibit of industrial art casts a lustre over the museum. Photographs of driving wheels of great locomotives, paintings of furnaces belching fire and smoke, towering skylines—

these capture the most idealistic aspects of industry. Margaret Bourke-White, an artist, is represented. She contends: "Any important art coming out of the industrial age will draw inspiration from industry, because industry is alive and vital. The beauty of industry lies in truth and simplicity; every line is essential, and therefore beautiful."

We missed paintings by Gerritt A. Beneker, many of which have been reproduced in this magazine. Beneker has portrayed the men who make and man the machines better than any other American.

Men and Machines was a special exhibit of the Museum of Science and Industry, but many of the exhibits are permanent. A special color exhibit—color in its every aspect—is to be staged in January. A food industry exhibit and marine transportation exposition are planned.

The Museum of Science and Industry is an endowed institution directed by Dr. F. C. Brown. It is described as "an international industrial museum, to illustrate man's endeavors from earliest time to the present." A group of well-known scholars and business men compose its directorship. Hugh Frayne, representative of the American Federation of Labor, is a trustee. Thomas A. Edison is an honorary vice president. The museum plans to occupy its present quarters for five years. By that time it hopes to erect a building suitable in design and spirit to the museum it houses. Above all else, the museum hopes to expand with American industry, record its progress, and bring the mind of American youth to the realization of the kind of civilization which is being built, and in which coming generations must live and work.

Come to Life

The Museum of Science and Industry has a young rival in Chicago, the Rosen-



DR. F. C. BROWN

Director of the Museum of Science and Industry.



KEPT INDUSTRY AT HOME.



PANEL 3—THE AGE OF MACHINES WROUGHT TREMENDOUS CHANGES.

wald Museum of Science and Industry. These two in no wise compare, however, with the great Museum of the Machine Age (the Deutsches Museum) presided over by Oscar Von Miller at Munich. This is described in a recent article in the New York Times Magazine, by Walde-mar Kaempffert, Director of the Chicago Museum. The Deutsches Museum apparently has pioneered in the field of industrial and scientific education. Every basic industry has contributed machinery and money, and the lightning imagination of the director has lit up the material. In Munich, the Museum is alive. To quote Mr. Kaempffert: "Von Miller slices a locomotive through the middle, jacks it up a few inches, and drives it electrically by concealed motors. An attendant climbs into the cab and pulls the throttle. Pistons move back and forth in their cylinders, and slide valves open and close. In five minutes you learn more about the principles of locomotive design and operation than if you were to spend two weeks over textbooks and blueprints.

"Over there stands Puffing Billy, a replica of the original locomotive in London, but a replica so exact that even the rust spots and hammer dents in the smokestack are reproduced. Puffing Billy ran in England in 1813. William Hedley, who designed the engine, would accept Von Miller's reproduction as his own creation. The boiler and cylinders are not cut open, simply because the mechanism is simple enough in itself. Instead of electricity, compressed air drives the pistons and wheels—a perfect substitute for steam. The clatter and din take one back to the early days of British railroading when Parliament was petitioned to check the introduction of frightful mechanical substitutes for the horse.

"Von Miller is imbued with so strong a sense of what is dramatically interesting that he was not content with

teaching astronomy by means of the usual orrery—a model in which a central ball stands for the sun and around which smaller balls are mounted to represent the planets. He wanted something deceptively like the real heavens with thousands of stars among which the planets would wander."

Mr. Kaempffert promises to improve upon Dr. Von Miller's method by depicting the historical and social aspect of machines. He will give the machines proper backgrounds. He could do well also to adopt methods of Dr. Otto Neurath, of Vienna, who has founded a museum to portray man's relation to industry.



HUGH FRAYNE

A. F. of L. Representative, Trustee of Museum of Science and Industry.

Musical Lighthouses Could Sing to Sailors

Talking lighthouses to tell sailors miles out at sea just which lighthouse they are watching, or even to entertain these passing mariners with news of the day or weather forecasts or the latest song and dance hits, were predicted by Mr. O. H. Caldwell, former United States radio commissioner and now editor of "Electronics", in a recent address to the Virginia section of the American Chemical Society in Richmond, Va. The secret, Mr. Caldwell said, is the modern process by which music, speech or any other sound may be "modulated" on a light beam much as radio programs are sent out on the beams of radio waves from a broadcasting station. To the eye such a music-carrying beam looks quite as usual but if it is allowed to fall on a photo-electric cell, properly arranged with vacuum tube amplifiers and other apparatus, the sound message on the light beam may be picked off and made audible. The beam from a revolving lighthouse, for example, might be made to sing a definite note whenever its rays fall on a small photo-electric cell mounted on a ship's bridge. Even the captain in his cabin thus would know, by the distinctive musical note of the beam, which lighthouse of several along a coast was then in sight. Such lighthouses now are distinguished by color or by the number and arrangement of flashes as the light revolves. The use of color necessitates decreased intensity of the light, since colored lights are not so bright as pure white ones. The recognition of lights by flashes requires considerable practice. It might be easier, Mr. Caldwell believes, to have each lighthouse identify itself by a musical note or even by spoken words, although the former might require ship's captains to possess musical ears in addition to the manifold qualifications already necessary for that job.

"Let no man think that the living standards of America can be permanently maintained at immeasurably higher levels than those of the other civilized countries. Either we shall lift theirs or they will draw ours down to theirs."—Owen D. Young.

COMMENT

By

PRESIDENT BROACH

I'M sorry. I just hurt a fellow. But sometimes it's necessary. He poured out his troubles. "Do you really want me to help you?" "Yes." "Then go look in the mirror and you will find 95% of your troubles." He flushed. He was hurt. But it made him think. You can't help men by deceiving, coddling or flattering them.

Having ideas means nothing. Every one has them. It's a great pastime. But getting them accepted—making them work, is what counts. That's the acid test. Ideas confuse and divide people unless they are accepted and can be made to work.

If men would first get their facts, they would keep silent in most cases. If they honestly criticized themselves, they would have little left for others. Some say "constructive" criticism. But this is meaningless. Others say "honest" criticism. But even a fool is "honest" in what he does. Let's call it factual criticism—criticism based on facts. It's the only kind that's justifiable.

The savage thinks he can bring rain by sprinkling water on the ground. A child thinks he can whip his enemies by yelling hard names. And grown men, who should know better, seek to blacken an opponent or a movement by hurling a term of fancied disgust. I refer to—"Racketeer."

When terms grow stale and fail, then others come. Just now "racketeer" is serving time. Slanderous tongues are wagging—anonymous, poisonous pens are working—in an effort to connect racketeering, in the popular mind, with labor organizations.

We know with what glee anti-union spokesmen have sought to fasten "socialistic"—"radical"—"red"—and "bolshhevistic" onto labor unions and their officials.

Once "republican" was a hated word. Today it's as harmless as warm milk, and as genteel as a stuffed shirt.

Jefferson was called an "atheist"—Lincoln a "nigger-lover"—Roosevelt a "demagogue"—Wilson a "school-master"—and so it goes. It's said the old lawyer told his son: "When the law and facts are against you, call your opponent names and question his motives, create suspicion about him. Suspicion has sent many men to jail."

In a confused world men must account for imperfections by setting up a devil. Droughts, famines, crop failures, disease—all used to be blamed on the devil. Misfortunes were explained that way. Since the devil is no longer credible, it's easy to blame union officials.

Serious depressions come every 7 to 10 years. But this time thousands of executives, clerks and other trained people in the so-called white-collar group have been hit hard—many eliminated by mergers and consolidations. These are hopeless waste because they seem unable to do anything else. Perhaps this is why there is such a tremendous interest in unemployment. Never before did the press or "big men" show such an interest.

Our unions should provide all relief possible. But relief plans must contain certain basic principles—based on long experience and knowledge of humans. If not, hell breaks loose. No task is harder—or creates more trouble—than trying to relieve humans in distress.

The time is not distant when all our unions will have permanent, well-established, workable relief

plans. It took them years to establish sick and death benefits on a sound, lasting basis. Only a few have yet to do this.

Nothing is more fatal to a human than idleness—especially of the mind. It eats him up. Decay sets in. Nothing destroys his mind, his self-respect and morale quicker. Idleness, illness, old age—go together. The happiest people are those kept busy. There's no substitute for a job.

It's extremely regrettable that internal strife and bad management in certain local unions caused this office to act. And prospects of unpleasantness were not permitted to influence us.

One objector writes: "We can see no reason whatever for the change you have seen fit to make here." He was told:

"We doubt that you can. Were you able to see the reason, you would have put an end to your disgusting and disgraceful conduct long before the situation came to our attention. If time shows a mistake has been made, it will certainly be corrected. But we will not permit ourselves to be bullied off the proper road to progress."

Our ambition centers on progress for our unions. And my frankness may appear brutal—but it's consistent with the determination that every condition interfering with the progress of this organization, SHALL be eliminated.

Today a union must have industrial credit—enjoy good will, good standing. It must be intelligent, dependable, responsible. Officers must be practical, sensible, faithful. But how can you enjoy these—how can you have an efficient union with a punch—if you are to apply high-sounding, general principles to its operation?

A letter says: "We have our employers beaten to their knees." Don't you realize that real progress for a union depends upon its contribution to improvements in the industry? Don't you realize that "beating

employers to their knees" is as wrong and harmful as employers grinding labor to the ground?

Progress in industry demands a mutuality of confidence between employer, employee and the buyer. Our unions must be so officered and managed as to assure their contribution toward this confidence.

This from a youthful minded, grey-haired veteran of Chicago:

"New ideas, new thoughts, new principles and methods of procedure that made this old world what it is today, were always the result of taking command and discarding theories and policies that had long outlived their usefulness."

This Chicago member—Jim Brennan—is living proof of what Clemenceau, former Premier of France, said when he was 78 years of age:

"Yes, I have discovered the fountain of youth. The secret is simple. Never let your mind grow inactive, and you will keep young forever. Idleness and old age go hand in hand."

Some of the paragraphs in these two pages each month are lifted from my replies to letters. Limited time compels this.

Unions are greatly understaffed. Few have enough representatives to handle even complaints and disputes. Every local union should have one or more representatives. They need to expand. They need more men to cover new fields and outlying territory. Some are finding they must organize, protect and patrol the territory they claim, or they lose it. You cannot build and protect unions by talk and false economy.

I have every regard for real fraternalism and real religion. But I hold both the giver and receiver of preferences in a labor organization—as a result of fraternal or religious connections—to be worse than a sneak thief.

H. H. Roach

(See next page)

GIVING OUT JOBS

(From reply
to a member)

THE influence of yours of the 9th has left me somewhat distressed. My deep feeling for the unemployed often results in a reaction that leaves me almost mentally torn to pieces. Nothing depresses me more—for I, too, have suffered through it all.

It's all so heartrending, I've yet to meet a single man who saw something of the suffering but who was affected by it. It becomes desperate for the union official just as it does for the member. Certainly no official can see his men out of work for long periods without feeling the effects of it.

Yours is not the only letter of its kind. I get them from all over the country and Canada. We haven't a single union, with men unemployed, but where many feel they are not treated fairly in getting jobs. But it's a physical impossibility to correct this.

Many times I've personally tried to devise some means to satisfy men in the distribution of jobs—to see that each man is treated the same. But despite my numerous personal efforts on the ground—despite the hundreds of plans I've seen tried out—I've yet to see any plan or any individual who could do this satisfactorily to all members during such periods.

Please don't misunderstand. I don't blame the men themselves. I know how they feel, how desperate they become, how prolonged unemployment positively poisons the minds of most men.

With the complex nature of our industry—with the intricate, difficult problems we face in it—with the employer demanding this or that man—with the old men trying to keep up with the young—with some having large families and others, none—with the inexperience of some men on certain classes of work—with the indifferent mechanic versus the highly skilled one—with sentiment and sympathy playing big parts—with likes, dislikes and prejudices of humans—all these and other factors have brought me to the conclusion that no way has yet been devised to distribute any jobs during such periods without the charge of favoritism being made—even by the most intelligent, fair-minded men we have.

In times like this, it's impossible to satisfy all minds. Men are hungry. What's still worse, their loved ones are suffering. Every rebellion has been given birth in want. Hunger itself is the food that sustains rebellion. Members of labor unions are afflicted with a rebellious psychology, peculiar to themselves.

For instance: An economic system in a land of plenty permits men to hunger, and their families to starve through unemployment. Men are members of labor unions primarily because they seek a fairer reward for their services in that system. When the union partially succeeds through wage increases—it's loudly applauded by the members. But when the same system paralyzes industry, and privation results, many of the same men assert themselves in rebellion—not against the system—but against the very organization that protects their interests in the system.

This rebellion often takes the form of an attack upon the officers, which sometimes destroys the helpfulness of the organization, and leaves the members in a more terribly weakened condition.

So I say: Difficult indeed is the position of the official responsible for giving out any jobs in times of unemployment. If there are 1,000 men out of work—and he is able to place 10—he makes 10 friends and dissatisfies the rest.

I have written you at length, hoping I might be helpful to your understanding of the true situation. And I'm going to publish this in our monthly magazine, knowing in advance that thousands will not and cannot accept these unpopular statements. For when suffering, gloom and despair set in, then reason departs and crooked thinking begins—even though the victims are not conscious of this.

Sincerely,

H. H. Broach

Reversal of Thought On Anti-trust Laws

BEFORE the Sherman anti-trust law was enacted in 1890, 42 bills seeking control of rapidly expanding trusts had been introduced into Congress. This represented tremendous fear on the part of the public. That this fear was not groundless is indicated by the 40 years of legal warfare, over rates and prices and other matters as between consumers and public utilities, and corporations. During that time the Sherman anti-trust law, and kindred laws which followed it, have had a curious career. How ineffective they have been in keeping big business little is seen at a glance. Just look at the telephone, steel, aluminum, anthracite, gasoline industries, just view the era of mergers just ending, and the anti-trust laws will be seen for what they are—dead letters. Only two cases of significance were prosecuted under the Sherman law, the Standard Oil, and packers cases. By court decree the Standard Oil had to become a federation of state units. Under duress, the packers agreed not to own and operate retail markets, and not to manufacture, to transport or distribute certain commodities. That was in 1920. Ten years later, the packers seek the removal of these restrictions on the ground that the law is unjust to them. Chain stores are allowed to do what packers cannot.

This leaves the anti-trust laws pretty much without any excuse for being. No. That is not true. They have been used with crippling effect against trade unions. How precious they are to open-shop and anti-union organizations is indicated by Walter Gordon Merritt, counsel for the League for Industrial Rights:

"I am not here contending that the anti-trust laws have never interfered with legitimate activities or that there may not be some details in which they might further be improved, but I warn you against the preachings of these false prophets, who speak unqualified condemnation of these laws and advocate their complete repeal. It is altogether too easy for those who find legal barriers between them and their objectives, to become impatient of the restraint and to look upon such laws as an unwarranted encroachment on liberty. So it is that some business men little realize that, by and large, the anti-trust laws protect, more than they curtail, liberty, and that in truth they have become a real citadel of liberty."

Mr. Merritt is almost alone in his preference for these laws. Business men, economists and labor leaders have recently pointed out the crippling effect of these laws on business (they hamper but do not halt consolidation), and their unjust use against labor.

Herbert Hoover, President of the United States

"It certainly is not the purpose of our competitive system that it should produce a competition which destroys sta-

Economists, labor leaders, and business heads see hampering effect on industry of antiquated statutes. Laws kept there largely through tender care of anti-union organizations, who use legalities to attack unions.

bility in an industry and reduces to poverty all those within it. Its purpose is rather to maintain that degree of competition which induces progress and protects the consumer. If our regulatory laws be at fault, they should be revised."

Thos. W. Lamont, Financier

"The present law constitutes almost a mandate to every wide-awake manufacturer to duplicate the facilities of his rival, and the result is bound to be a great economic waste. I am not assuming to suggest the sort of remedial legislation that should be had in order to avoid this obvious wastage of capital, brought about through almost unbridled competition. But at least we can remember that the present anti-trust laws date from 1890. Would it not seem advisable for our national legislature at least once in a 40-year period to review the workings of a statute like the Sherman anti-trust act, which bears so vitally upon the problems of capital and labor?"

Rudolph Spreckles, Sugar Magnate

"Our state and federal laws governing business conduct are not conducive under existing conditions to the preservation of vested capital. Nor do they promote the welfare of our people. Under our anti-trust laws several corporations may merge, whereupon the

directors of such companies may legally do many things which they would not have been permitted to do in consultation while they were competitors.

"The United States Supreme Court decisions have not so clarified the legal questions involved in our anti-trust laws that legal opinions may be relied upon by business men as a safe guide in the conduct of trade associations or business generally."

New York Trust Company, Important Bank

"That economic conditions have altered the meaning and significance of 'competition' since the passage of the Sherman Act, is not seriously denied by competent economists. The term now implies not a struggle between a large number of small units similarly engaged, but a business rivalry between important well organized corporations. Furthermore, that some co-operation between enterprises is advisable, in the interest of efficiency, in order to prevent overproduction, or to meet foreign competition, is being generally admitted.

"Such considerations have also served to modify the psychology of the public. In addition, in step with the economic progress of the country the former apprehension of mere size has generally subsided."

Ethelbert Stewart, Commissioner of Labor Statistics

Ethelbert Stewart, Federal Commissioner of Labor Statistics, who called for repeal of the Sherman anti-trust law, at the recent meeting of the American Academy of Political Science, described the law as "an economic blunder," written on our law books "in a fit of fear and terror at the rapidity of our own industrial growth."

"The result," he said, "has been that the nation's great minds, estopped from developing along lines of industrial or-

(Continued on page 54)

Locals Vote on Convention Date

We are in receipt of the following information from D. A. Manning, Secretary-Treasurer of the Illinois State Conference of the I. B. E. W.: that a proposition has been sent out to all local unions affiliated with the state conference, for a vote as to whether they are in favor of, or opposed to the postponement of the 1931 convention until the year 1933.

While the notice has only just been sent out, Secretary Manning advises us that the following have already voted in favor of postponing the convention until 1933: Local Unions Nos. 9, 134 and 713, of Chicago; No. 427 of Springfield; No. 538, of Danville, and No. 601, of Champaign and Urbana. The following are opposed to postponement of the convention; Local Union No. 34, of Peoria, and No. 309, of East St. Louis.

This is being published in the JOURNAL at the request of the Illinois State Conference of the I. B. E. W., for the information of the Brotherhood.

France-Germany Have Economic Councils

By LEWIS L. LORWIN, Author of "Labor and Internationalism"

THE prolonged depression has brought forth an outstanding proposal, namely, a planned economy. This is securing the support of corporation heads, organized labor, and economists. Such a proposal was made in this JOURNAL about three years ago, as an inevitable accompaniment of mechanized production. To resume:

1. Mr. Lorwin, it now has been nearly three years since you first proposed through the columns of the ELECTRICAL WORKERS JOURNAL, the establishment of a National Economic Plan Board. At that time there was little or no interest in the matter. Since that time—and especially at the present moment—there is unusual and widespread interest. How do you account for the unusual growth in the acceptance of the idea?

When I addressed the American Economic Association at its annual meeting in Chicago in December, 1928, and suggested the possibility of American economists taking the initiative in promoting the idea of a national economic council, I was inclined to say that within five years such an idea would be one of the topics of the day, and one of the problems of practical politics. However, I was so impressed by the apparent indifference of the country to such an idea that I changed my prediction from five to 10 years. As events now show, I was wrong in both cases. Within two years after my prediction the idea of a national economic council is a matter of wide public discussion, and one gathering after another of economists, engineers, statisticians, and even business men, is now advocating the idea of one form or another.

Still, looking back upon what has happened in the last three years, one can single out four main developments which are responsible for the growth of interest in the idea of an economic council. These developments may be listed as follows:

(a) The widespread worry and concern caused by the so-called depressed industries, such as oil, coal and textiles. Even during the height of our prosperity these industries, with large capital investments running into hundreds of millions of dollars, and hundreds and thousands of workers, were in a state of agonizing suffering, unable either to provide full employment to those engaged in it or to pay the proper return on the investment. All examinations of these industries by business doctors or economic experts led to the same diagnosis: They were suffering from a maladjustment between their capacity to produce and the capacity of the market to absorb their output, which produced an unwholesome competitive condition and aggravated the price situation.

(b) The second development which had the same effect was the wide discus-

Labor in each country was active in founding these agencies. Interest in America in this form of economic control prompted this JOURNAL to ask an international authority on industrial relations and economic organization to describe plans obtaining in these countries.

sion of what has been called technological unemployment. Already in 1927, but especially in 1928, the dislocating effects of the rapid growth of mechanized mass production began to impress all those connected with industry, especially the leaders and officials of organized labor.

(c) Undoubtedly the fact that gave the idea its longest push was the stock market crash of October, 1929, and the depression which came in its wake and which is with us still. What has happened since October, 1929, has been a rude awakening from an economic trance into which American business leaders and the American people as a whole had fallen.

A. F. of L. Leads

(d) Last but not least, the definite and determined advocacy of a national economic council by the American Federation of Labor at its convention in Boston in November, 1930, has brought the idea into the realm of practical economic and political life. In this respect, I think, American labor is illustrating again that the initiative for a greater degree of conscious co-operative effort in the organization of our economic life must come and can come from organized

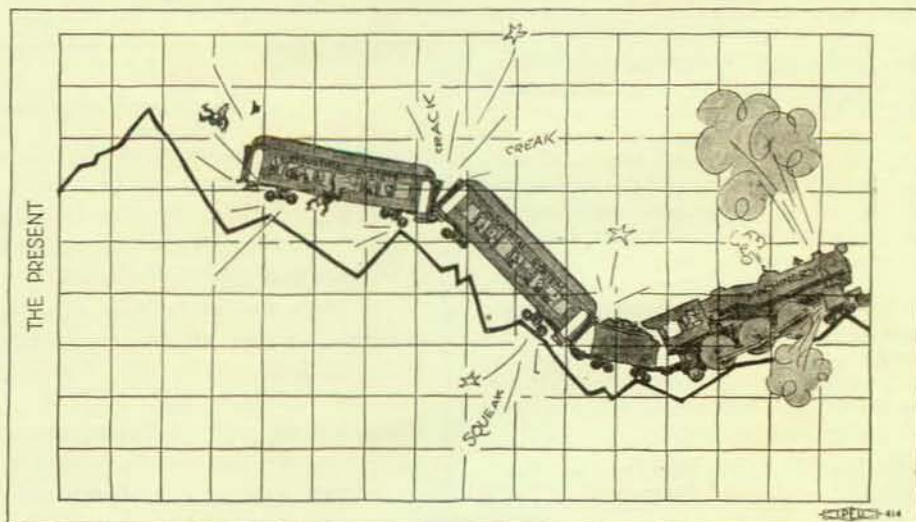
labor. Such has been the case in Germany since 1919, in France, and in England. According to the latest reports, also the Australian Council of Labor has come out for a national economic council in Australia along similar lines.

2. I understand that France and Germany have already instituted such economic councils. Will you review the history of these cases, beginning first with France?

France and Germany have had national economic councils for some time. The French economic council has been in existence since 1925, and the German since 1920. These two councils differ in many ways, but they have the same aim. And a comparison of their organization and activities is very instructive.

(a) Beginning with France, one may say that the National Economic Council owes its origin primarily to the insistent advocacy of French organized labor represented by the General Confederation of Labor. The first proposal for such a council was made by the General Confederation of Labor in 1918 and in 1919 as a means of carrying through a large program of social reconstruction which was the order of the day at that time. When Clemenceau tried to befuddle the issue the General Confederation of Labor created in 1920 an economic labor council composed of delegates from workers and consumers and agricultural organizations, which existed for over a year and which made various studies for the purpose of economic reconstruction and did a great deal to educate public opinion to the post-war economic and social problems.

After some further agitation, the French government under Herriot appointed a committee in July, 1924, to study the question of setting up a national economic council. This committee



By courtesy and permission of Saturday Evening Post. Copyright 1930

IF WE TALK ABOUT IT ENOUGH—

prepared a report which was accepted by the government, and in 1925 Premier Herriot set up a national economic council by decree. The council has existed since then on the basis of that decree.

The council as it exists today is not entirely in agreement with the project advanced by the Confederation of Labor, and is somewhat of a compromise institution. The principles which underlie it are, first, that it is representative of all the active elements of the people. Intellectual and manual work, the liberal professions, real estate, commerce, industry, and banking are represented. In order to avoid a large delegated body which would become a sort of parliament and which might be unwieldy, the method has been adopted by grouping all elements of the people into three main categories, namely population and consumption, labor and capital. To get the most representative spokesman of each group, the delegates for the council are selected from the most representative organizations in each group. These organizations are asked to nominate the persons whom they wish to send as delegates to the council. The organizations were selected by the Minister of Labor, and have so far been generally approved as adequate. The minister has tried to choose the largest, most active, and most typical organizations of each section of the people.

Ministry of Labor Pays

The French National Council is attached to the Prime Minister's Department in France. Its budget is supplied from the budget of the Ministry of Labor. The council is free to fix its own agenda, and it has the power to settle any disputes which arise out of the government's choice of the representative organizations invited to send delegates.

As at present organized, the French Council consists of 47 delegates who are chosen as follows: Nine delegates from the group of population and consumption, eight delegates for the group of capital, and 30 delegates for the group

of labor. The 30 delegates for labor include 11 delegates for management. These 11 delegates are distributed as follows: Three for management in industry, three from the agricultural associations, two from various commercial bodies, one from transportation, one from the co-operative societies, and one from public service. The 30 delegates for labor also include two delegates representing organizations of independent artisans.

Thus there are 17 delegates who represent labor in a more restricted sense of the term. Of these 17 delegates, three are from the organizations of teachers and intellectual workers; two are from the organizations of technical workers; two are from the organizations of civil servants; the remaining 10 are from organized labor in industry, commerce, agriculture, and transportation. Of these 10, nine are appointed by the General Confederation of Labor and one is appointed by the Christian Trade Union Federation.

Each delegate is provided with two alternates, so that the total number on the council is figured as 154, though only 47 are in session at any one time.

The whole body meets four times a year. Between these meetings there is a standing committee of 10 and a permanent secretariat. In addition, the council has a number of experts who are associated with its work on a permanent basis.

The French Council is primarily an advisory body. Its work takes three forms: It makes reports or technical studies of an economic nature which are of national or international importance,

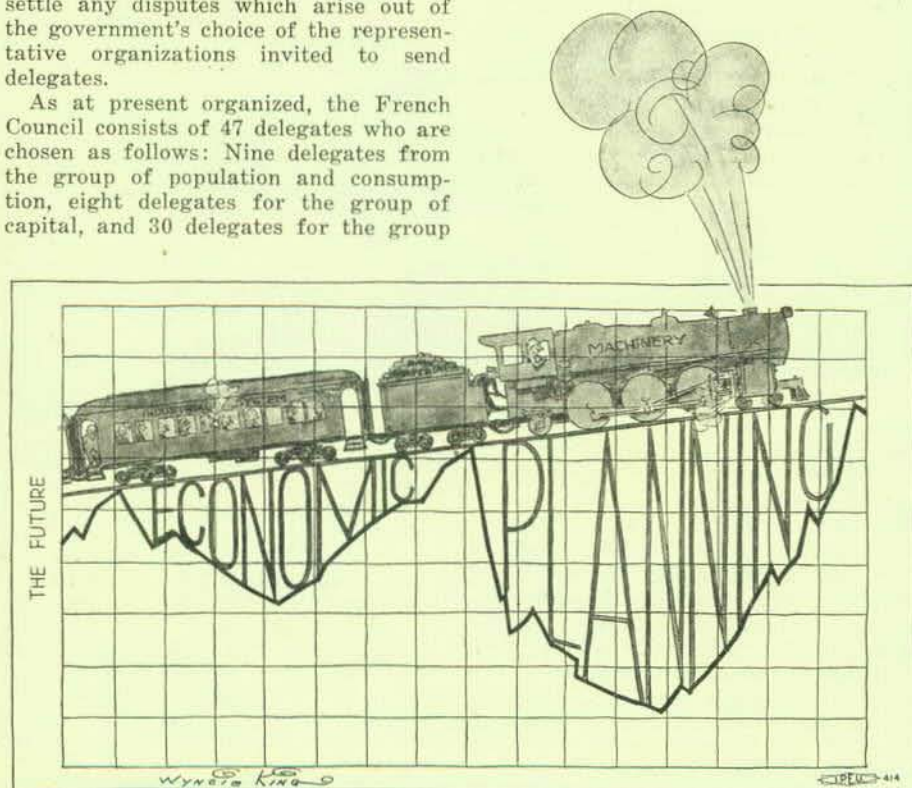
which are not of an urgent character but have a long range interest. The council is free to choose these topics to investigate and to report upon. Secondly, it renders advisory opinions which it may submit itself or at the request of a minister. Any law introduced into the chamber of deputies which bears on an economic question must be transmitted to the council for its information. When the council submits an advisory opinion on economic bills pending before the chamber of deputies, the Prime Minister is under no obligation to carry out the recommendations of the council, though these recommendations must be given publicity and the Prime Minister must inform the council as to what action is taken. Thirdly, the council may make recommendations to the various ministers and to the Prime Minister which have no obligatory character.

Germany's Is Well Tried

(b) In Germany the idea of an economic council has a longer history. As early as 1879 Bismarck had thought of an economic parliament which would act in an advisory capacity to the government in economic matters. An economic council was set up in 1881 which only lasted a short while.

The idea continued to be discussed before the war, but received a real impetus only after 1918 when the revolution in Germany brought up the question of re-organizing all economic and political institutions. In 1918-1919 plans for a national chamber of labor and for some sort of a national council of economy were agitated in the trade unions and in the Socialist Party of Germany. Various plans were submitted, and after much discussion and some opposition on the part of the more conservative socialists, the Constitutional Assembly at Weimar adopted Section 165 of the constitution which provided for a national economic council whose resolutions and recommendations the government must submit to Parliament. On August 15, 1919, when the first Reichstag under the new constitution was constituted, it set up a provisional economic council. On May 4, 1920, the details of organization of this council were worked out and the first meeting of the council was held on June 20, 1920.

Like the French Council, the German proceeds from the principle that it is necessary to balance all the component interests of the country and to maintain an equality between the representatives of the workers and employers, of industry and agriculture, and to protect the interests of the middle classes and of all the active occupations of the country. But in contrast to the French Council, the German is a much larger body. It consists of 326 members, who are distributed as follows: Sixty-eight are representatives of agriculture and forestry; 68 represent industry; 44 represent banking, commerce, and insurance; 24 represent transport and public utilities; 36 represent the artisan class; 30 represent the consumers; 16 represent officials and professors; and there are 24 mem-



bers who are appointed as legal or technical experts, half of whom are appointed by the government and half by the Reichstag without special nomination. Within each group, such as agriculture, forestry, industry, there is an equal number of delegates of employers and employees; for instance, in agriculture 22 delegates represent employers, 22 delegates represent employees, 14 delegates represent small employers, and 14 represent co-operative enterprises. In industry the delegates are 24 employers and 24 employees who are named by the organized associations in different industrial groups, and there are 10 employers and 10 employees who are named by the central organizations in different states of the Federal Union.

Committees Do Work

According to the original plan, this body was to hold plenary sessions and it did so until 1923. But on account of the unwieldiness of the large body of delegates, there have been no plenary sessions since then and the council functions entirely through committees. There are 11 committees and nine sub-committees. The two important standing committees are the so-called economic committee and social policy committee. The economic committee has nine sub-committees, such as a sub-committee on the control of foreign trade, export deliveries, agricultural food supply, coal, lumber and forestry, credit for productive purposes, etc. The other committees are a committee on finance, a constitutional committee, a committee on federal waterways, a committee on colonization and housing, a committee on the development of productive resources, a committee on exports, a committee on works, councils, etc.

The two most important committees, on economic affairs and social policy, consist of 30 members and 30 substitutes each. Some of the other committees are more numerous. It is the practice of all committees to hear and consult experts and persons directly interested, who are not required to speak on oath and are free to decline to give evidence. The council is in touch with the Reichstag and the government. The government is entitled to send representatives to all the meetings of the committees as well as to the plenary sessions of the council. The latter in turn has the right to require, if not the presence of the ministers themselves, at least of one of their representatives. According to the order of 1920, all government bills on political and social questions must previously be submitted to the council, but in practice this rule is not observed. The total cost of the German Council has been estimated at about 650,000 marks per year, or about \$150,000.

The German Council has been provisional since 1920, and several efforts have been made to draft a law which would give it permanent and stable status. The last law, which was introduced in 1928, has been defeated. The chief reason has been the difficulty of obtaining agreement as to the composi-

tion of the council under the new arrangement. The new law provides for a reduction of the membership from 326 to 151. But the defeat of the bill for the new council does not in any way jeopardize the existence of the council as at present constituted, and it is expected that an agreement as to the distribution of seats on the council will be reached soon, and a new law giving the council permanent status will be passed.

It should be pointed out that in Germany, as in France, the initiative for the Federal Economic Council came from the workers. The trade unions lay great stress upon the work of the council and have supported it all through its existence. But the council has also won the support of the employers' organizations so that today it may be said to have the general support of the people.

3. What have been the practical gains of such a body to these nations?

So far, neither in France nor in Germany have the practical gains of the national economic councils been as great as had been expected. The fault, however, lies not in the national councils but in the general economic and political situation. In both countries the national economic councils were not given the wide functions and opportunities which had been originally planned for them, and their activities have been circumscribed by political considerations and international difficulties. In Germany especially, the international complications such as reparations and security have made the Reichstag very wary of purely scientific economic investigations such as the National Economic Council might submit. Besides, time has been short.

However, considering the shortness of time and the limiting conditions, the National Economic Councils both in France and in Germany have been of definite practical importance in four ways. First, they have been very helpful to the various departments of the government in making studies and in giving advice on problems of economic and administrative importance. Second, they have shown capacity for elaborating quickly a program and for meeting a problem when it arose. For instance, the National Economic Council in France drew up quickly a comprehensive scheme for relieving unemployment by public works in 1926 when France was threatened by depression and unemployment as a result of financial disorganization. The program was not used because the rapid recovery after the stabilization of the franc made it unnecessary, but it was an excellent illustration of the possible service which the council could render in cases of necessity. Thirdly, the National Economic Council in France has been working for some time on an elaborate economic investigation which is in its nature a survey of the whole national productive equipment and economic needs of France. It covers a study of the requirements of raw materials, machinery, labor supply, markets, industrial relations, taxation, etc., and may be said to be in the nature

of a national economic survey. The importance of this study was recently recognized by Premier Tardieu as supplying a basis for a general program of national reorganization which could be undertaken in case of an economic crisis to revive industry and economic life. And fourthly, the National Economic Council in France has been extremely serviceable in bringing together the opposing economic interests of the country in a matter of fact and courteous discussion of general national economic problems. While the sessions have been at times stormy, there has been an unexpected degree of co-operation between leaders of labor and the leaders of industry and the other economic elements, and a greater understanding of economic realities in all groups of economic life.

Co-operates With Legislature

In Germany the National Economic Council has perhaps had a more varied career since its beginning. It acted as an advisor to the government in 1920 during the negotiations on reparations. It helped to elaborate a program for financial reforms in 1921. It made special studies of different industries and their reorganization, including a large study on the practices of cartels or selling associations and price policy. In addition, the technical sub-committees have made intensive studies on such topics as the regulation of waterways and irrigation, imports and exports, housing, fuel and food supplies, etc.

While at first the Reichstag was somewhat unfriendly, fearing the competition of the economic council, there has developed in the last few years a much more co-operative attitude. The council has been called upon more and more to give advice on economic measures and to submit recommendations for economic legislation.

Again, while there has been considerable conflict in the sessions of the councils, especially in the plenary sessions where divisions have tended to be along economic lines, with the trade unions on one side and the employers on the other, there has also been a gradually greater development of social harmony. The intermediate groups consisting of the delegates of consumers and the professionals and the experts, have tended to play an immediate conciliatory part and to bring into the discussions a more dispassionate and objective attitude and a greater consideration for larger social purposes.

(To be continued in February.)

What a place to be in is an old library! It seems as if all the souls of all the writers that had bequeathed their labors to these Bodleians were reposing here as in some dormitory, or middle state. I do not want to handle, to profane the leaves, their winding-sheets. I could as soon dislodge a shade. I seem to inhale learning, walking amid their foliage; and the odor of their old moth-scented coverings is fragrant as the first bloom of these scintial apples which grew amid the happy orchard.—Charles Lamb.

Conference Looks Toward World Council

THE International Industrial Relations Association was founded at Flushing, Holland, in 1925. Its primary object, as stated, is "to focus attention on the need for working out a technique of satisfactory human relations, including right working conditions" within industry. Dr. Mary Van Kleeck, of the Russell Sage Foundation, is a vice president, and a representative for the United States. On her invitation, President H. H. Broach has consented to co-operate in the 1931 program; he will prepare a paper on industrial relations in the electrical construction industry of the United States.

Announcements of the 1931 conference to be held at Amsterdam in August, stress the economic unity of the world.

"Economic unity has two aspects: It is both a fact and an aspiration. Development of means of transport and communication is day by day establishing unity as the next stage of economic evolution. The process is not yet complete. Some regions of the world remain largely self-sufficient. Others are more closely interdependent. But interdependence is rapidly taking the place of self-sufficiency. This constitutes the factual aspect of the subject."

Unemployment World Problem

The sponsors of the conference view unemployment and economic instability as world problems.

"There is an ever-growing realization of the fact that industrial relations are profoundly disturbed because neither labor nor capital can fully function in a world of unadjusted resources, production and consumption. Unemployment today is widespread throughout the world. Markets are restricted by lack of purchasing power. Productive capacity has been enhanced at an increasingly rapid rate by mechanization and the advance of technological invention. Yet in a world of enlarged economic resources, groups in industry, whether conceived as employer-employee, labor-capital, producers-consumers, are prevented from functioning normally, that is, human relations in industry are not satisfactory. All groups concerned in economic life are therefore compelled to ask:

"Can the methods of science be utilized to achieve balance between resources, production and consumption? Can science be substituted for casualism in the development of economic policy? How can sufficient information be placed at the disposal of those who must form economic policy in individual companies, in industries and in nations, so that they may understand the factors in the problem of adjusting resources, production and consumption?"

Economic interdependence of nations leads industrial relations group to break ground for the establishment of a world body similar to national councils now in force in France and Germany. President Broach co-operates with the International Industrial Relations Association.

Planning Needed

"The answer to the question must be sought by all groups in co-operation. If one group imposes its limited interest upon another, if output be unreasonably restricted by labor, if prices be held artificially high by monopolistic business, if governments limit the contributions of their national areas to the world's economic life, balance is disturbed for all."

Planning is one solution for these problems.

"In this situation of lack of balance between human needs and the resources which actually exist for meeting them, experience in industry itself suggests the necessity for applying over a wider scale the methods of research and planning which the scientific management move-

ment has introduced as the fundamental procedure in the management of a single industrial enterprise. Planning is to be regarded not as an isolated act, but as a principle denoting a changed attitude. As applied to the task of achieving economic unity, it does not mean that a single group would make a plan and impose it upon others. It means, rather, that all who are engaged in economic life would seek the solution of problems by first studying the facts and then co-operating in the single objective of utilizing the world's economic resources in the service of all the people of the world. This is not Utopian, but a practical, realistic application of the methods of science to achieve balance between resources, production and consumption."

Amateur Photographers Snap Back-and-Forth Lightning

A study of French lightning is being made by amateur photographers organized by the Astronomical Society of France. Already many photographs of lightning flashes have been sent in and studied by the Society's experts. It has been found that these flashes seldom if ever are single, but that there are always a number of back and forth surges of electricity between the earth and the clouds almost like an electric arc following the path of the first spark where this spark has broken down billions of atoms of the air gases and to make the path more highly conductive for electricity. This is a conclusion already considered probably by American observers using high-speed motion picture cameras. Another and less well-known conclusion of the French study is that the path of a lightning flash may continue to glow for an appreciable time after the electric flashes have ceased entirely, this glow presumably being caused by the re-combination of the atoms of air gases decomposed by electricity. One of the chief needs of further lightning study, it is stated by Dr. Emile Touchet, vice president of the society, is for additional photographs of lightning flashes by cameras with plates moving at high speed, so that the direction of the flash and the nature of its motion through the air can be determined. Another need is for stereoscopic photographs of the same lightning flash from two or more different points at measured distances apart on the ground, so that the heights and distances of the two ends of the flash can be computed. Members of the society are now being asked to attempt these additional tests.



DR. MARY VAN KLEECK

United States Representative to the International Industrial Relations Association.

Men are tattooed with their special beliefs like so many South Sea Islanders; but a real human heart with divine love in it beats with the same glow under all the patterns of all earth's thousand tribes.—O. W. HOLMES.

Engineers Find "Scientific Value" in Unions

WHETHER the Taylor Society ever formally accepts the report of its Industrial Code Committee, or not, whether it sharply revises the new code in its final draft, or not, a long step has been taken toward the clarification of issues in the field of industrial relations. A committee of notables reported on a "tentative draft for discussion" of the Industrial Employment Code at the annual meeting of the Taylor Society held in New York City, December 5. Already that document has provoked nation-wide comment.

The new code is rich in the statement of important principles. The salient declaration, as far as organized labor goes, is found in the final paragraph of Section X:

"Theoretically it seems logical that any employer should have the right to negotiate and deal with any employee individually. But when it is considered how disproportionate is the power of a modern large-scale employer to the power of any individual worker, it becomes apparent that labor is no more than reasonable when it insists that all the workers in a particular plant or project, or all the workers in a particular trade or craft, shall be considered as a unit for purposes of negotiating and bargaining with employers. Labor's right of collective bargaining is now, in this country, so widely recognized as to be generally beyond debate in theory and beyond contest in practice. That right may be exercised through various forms of organization. 'Company unions,' however, can perform the function of collectively representing the employees only if control rests fully and really with the workers. With whatever form of workers' organization an employer must deal, fairness, good faith and complete frankness about all governing facts are the surest means to understanding and agreement.

"Any condition of the work contract binding the workman not to join an independent labor union is inadvisable. Such a promise is necessarily coerced and its exaction is born of lack of confidence. It therefore destroys at the outset the willingness and loyalty out of which the co-operative spirit must grow and engenders instead either apathy and servility or a covert hostility. It promotes secret association apt to flame into violence. Furthermore, the trend of the courts is to the opinion that such a promise is against public policy and hence unenforceable."

Coming from the source it does, this pretty completely abolishes the argument that the company union has a future in a rationalized industry.

Other principles enunciated:

1. "Industry as used in this code may be defined as including those branches of economic activity in which men and women are employed in numbers for wages in occupations involving the use of machines or auxiliary to them; or

In historic report, sub-committee of Taylor Society—apostles of scientific management—places the union above the company organization. Notables compose sub-committee.

employing workers in subdivided tasks.

"Employment as used in this code includes human relations and conditions in an enterprise or an industry."

2. "Human relations and conditions in industry may be regarded as satisfactory if they result in the effective co-operative functioning together of employer and employees in a socially desirable manner for the attainment of an agreed objective. Thus human relations and conditions are not separate from management, but an essential phase of it and dependent upon its competence."

3. "Not only the wage scale established but the method of determining wage rates is a vital factor in employer-employee relations."

4. "Time study should be a joint enterprise between the worker and the observer."

5. "Secrecy should never be permitted; frankness is an indispensable condition for its full usefulness."

6. "Standards already established in an industry and in the locality should be reviewed at regular intervals, with the presumption that improvements in productive capacity should be reflected in increased earnings."

7. "All wage adjustments should be based on procedures which insure at least relative permanency."

8. "A working day of eight hours has been so generally accepted in industry, as meeting the social needs of the worker and as a safeguard of efficiency in production, that the burden of proof rests heavily on any longer schedule."

9. "But the needs of the workers for leisure and for protection against excessive fatigue set maximum limits within which management must be competent to devise methods of production to fulfill these social needs."

10. "The working week should always insure one day of rest in seven."

11. "It is to be expected that the world's increased productive capacity should result in increasing leisure for the workers, and it is to the advantage of a proper balance between production and consumption that industry should not be too slow to reduce daily and weekly hours as higher levels of output are permanently attained."

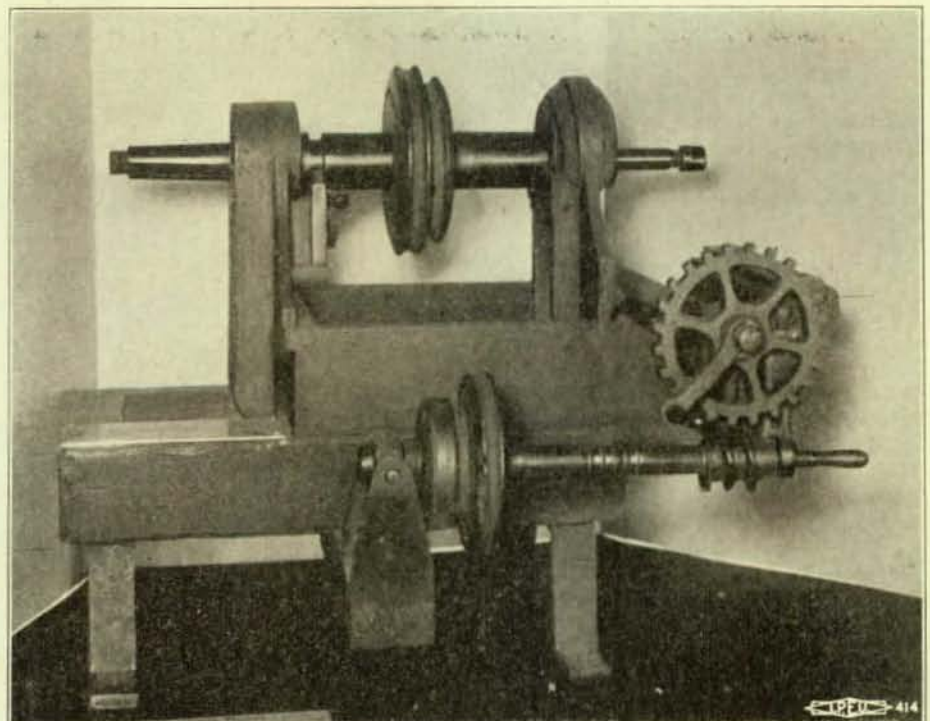
12. "Night work should be avoided where possible and should never be required of women employees."

13. "Minors under the age of 18 years should never be employed longer than eight hours a day."

14. "To insure relative permanency and continuity of employment should be an objective of good management."

15. "Technological improvement—the invention and adoption of energy-saving equipment and the discovery and adoption of improved methods of work—should be a matter of continuous con-

(Continued on page 54)



MILLING MACHINE BUILT IN 1818 BY ELI WHITNEY, INVENTOR OF THE COTTON GIN.

Seattle Finishes World's Highest Arch Dam

By J. D. ROSS, Superintendent of Lighting, City of Seattle

IN October, 1930, the City of Seattle completed Diablo Dam, Skagit River, and the swift rapids of this mighty stream are suddenly stilled to a lovely lake six miles long that mirrors the rugged canyon walls and snow peaks of some of the finest mountain scenery in America. Diablo Dam is part of the second unit of Seattle's Skagit River power development, a project that will ultimately bring the power of 1,120,000 horses to the service of the industries and homes of the city. Larger than Muscle Shoals, this project can only be compared with the Boulder Dam development of the U. S. Government,



J. D. ROSS
Superintendent of City Light
Company, Seattle.

whose million horse-power is to be distributed to the power companies and cities of five states, while the Skagit, with over a million horse-power, is being built by one city. The waters back of Diablo Dam are held in storage to turn the two largest water wheel generators ever built, rated at 93,000 horsepower each, which are now being made in the east.

Huge Voltage Generated

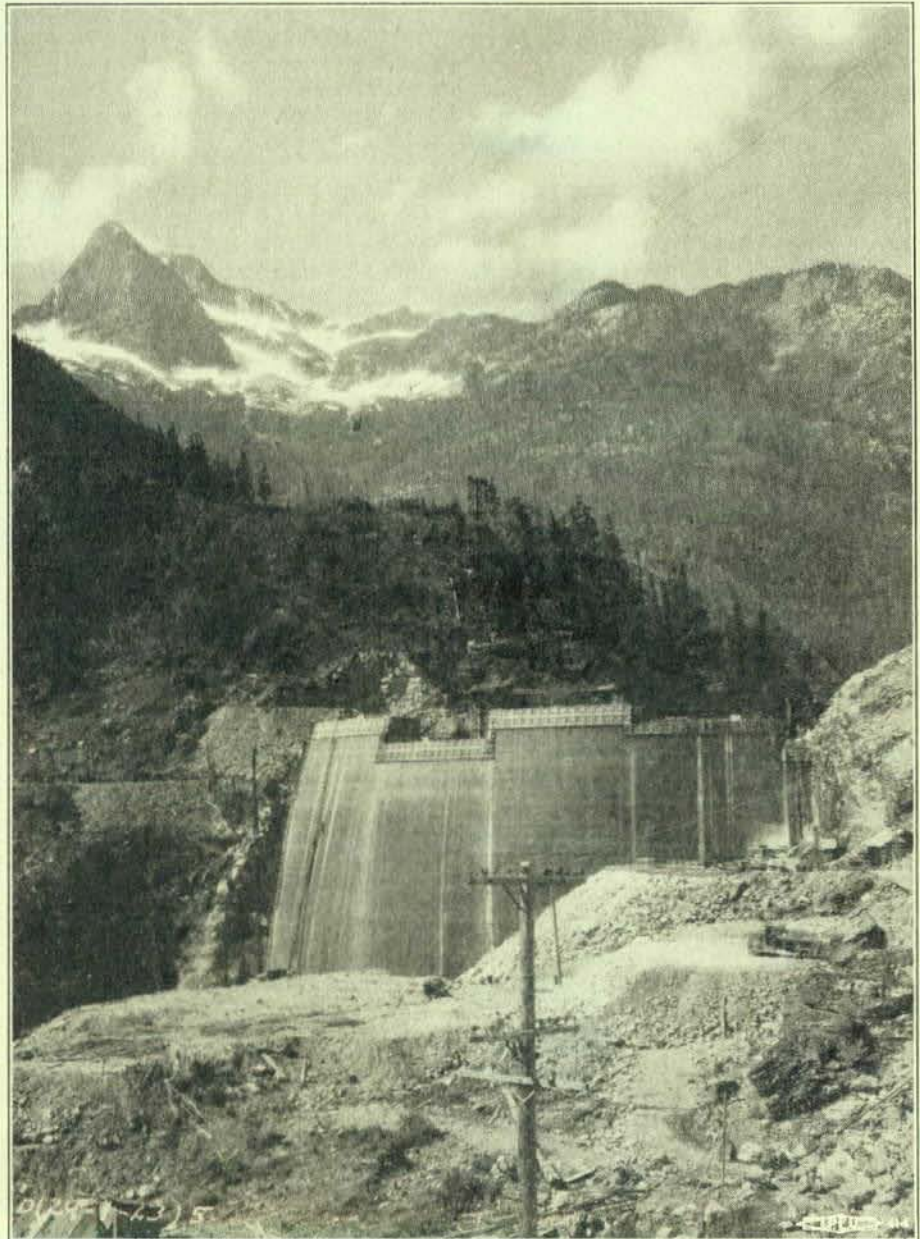
George Power House, the first unit on the Skagit, contains three 37,500 horse-power machines. This station began generating in 1924 and has already turned out \$18,659,275 worth of current, figured at the low prices prevailing in Seattle. It is farthest downstream of the three plants of the Skagit project, and is located at the lower end of the magnificent canyon. This plant operates on normal stream flow and must wait for the great Ruby Reservoir before it is extended to its full capacity of 320,000 horse-power. Water for Gorge plant is diverted by a crib dam at a point three miles upstream from the station, and is carried through a mountain of solid granite in a concrete lined tunnel 11,000 feet long, and 20 feet 6 inches in diameter inside. Ultimately the crib

Description of the new municipal development on the Skagit River.

dam will be replaced with one of concrete to raise the head on the wheels from the present 270 feet to the ultimate 375 feet, backing the river up to the tail races of Diablo Power House four and one-half miles upstream. Then a second tunnel will be built to utilize the full flow of the stream, regulated by Ruby Dam, and generators installed to bring the capacity up to 320,000 horse-power.

Meanwhile the ever increasing demand for power is met by building the first portion of the Diablo unit, including Diablo Dam and Diablo Power House, with two 93,000 horse-power machines. Water is carried through solid granite from reservoir to power house as at Gorge plant, but at Diablo the tunnel is only 2,000 feet long and 19 feet 6 inches diameter inside the lining of concrete. Diablo Dam is 389 feet high over all—the highest arch dam in the world. It is keyed into the enduring granite walls of Diablo Canyon which provide a perfect foundation to hold the tremendous pressures of water due to the extreme height of the dam.

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THE HIGHEST ARCH DAM IN THE WORLD HAS A FITTING TOWERING BACK-GROUND FOR ITS RELIEF.

Technological Changes and Unemployment

By ELIZABETH M. MORRISSY

THE present generation rather prides itself, in season and out, that it faces facts and their consequences more readily and more frankly than have previous generations. Let us then, for the time allotted to us, be strictly modern and face one fact and its consequences. Let us face frankly the indisputable fact that according to all reliable sources the number of persons employed in agriculture, manufacturing, mining and railroading has grown steadily less in the last 10 years and this at the same time that the output of these industries has increased. In that simple statement is included the whole problem of unemployment caused by technological changes. To put it more definitely into concrete figures, according to government statistics, there has been a 10 per cent reduction in the number of persons employed in manufacturing industries since 1925 or again—according to the same source the decline in the number of persons engaged in agriculture between 1919 and 1925 approximated 600,000 in manufacturing industries. The decline over the same period was 900,000 and in railroading 150,000. Or again, from other figures compiled from equally reliable sources the total decline of the persons employed in the four great basic industries has been approximately 2,800,000 in the past decade.* It is with these 2,800,000 workers who have been released from participation in these industries that we are concerned when we use the rather high-sounding phrase, "technological unemployment."

The term has now come into common use to designate loss of employment that results from an increasingly rapid introduction of speeding up processes, reorganization of industry, and numerous kinds of mechanical inventions and labor-saving devices. Out of the mass of current discussion today on unemployment, its causes, its evils, its remedies, we must disentangle this one particular kind of unemployment for the purpose of our analysis.

*Paul Douglas, "Technological Unemployment," *Federationist*, August 3p.

An address delivered at the Catholic Conference on Industrial Problems Meeting, Washington, D. C., December, 1930. Dr. Morrissey asks conferees consider eliminated workers' plight.

sis, as to causes, consequences and remedies. The discussion of the general question is complicated this season because we are suffering from all the major types of unemployment—seasonal, cyclical and technological. It is not easy to isolate any one and study it as a separate phenomenon. Since the seasonal and cyclical are more acute stages and cause greater alarm, because the tragedy is more readily sensed, most of the discussions and remedies so freely offered are planned to meet these emergencies.

Describes Kinds of Idleness

Seasonal unemployment is familiar to all. In this the complete cycle of increasing and decreasing demand falls within the 12 months. Certain trades and industries are particularly active during certain months and less active or even stagnant during other periods.

Catholic Conference on Industrial Problems

Wages, not dividends, should have first claim upon a corporation's income. This principle was one of several which issued from the Catholic Conference on Industrial Problems, sponsored by Most Reverend Michael J. Curley, D. C., Archbishop of Baltimore, held in Washington in December. This conference represented one of a series held throughout the nation, in key cities, during the autumn. The organization is described as "a national organization of Catholics formed to promote the study and understanding of industrial problems by the calling of conferences at which no vote is taken on questions of industrial policy."

The varied program brought strongly to the fore questions of unemployment, insecurity, wages, and hours, and the relationship of Pope Leo's Encyclical to modern industrial problems.

Dr. Morrissey's paper herewith printed in full is indicative of the quality of the addresses.

The national officers are:

Dr. J. E. Hagerty, director, School of Social Administration, Ohio State University, Columbus, Ohio; Rev. R. A. McGowan, assistant director, Social Action Department, National Catholic Welfare Conference, Washington, D. C.; Linna E. Bresette, Social Action Department, National Catholic Welfare Conference, Washington, D. C. David A. McCabe, professor, Princeton University, Princeton, N. J.; Frederick P. Kenkel, director, Central Bureau of the Central Verein, St. Louis, Mo.; Rev. John P. Boland, D. C., pastor, St. Columba's Church, Buffalo, N. Y.; James W. Byrnes, president, Byrnes Belting Company, St. Louis, Mo.; E. F. DuBrul, general manager, National Machine Tool Builders' Association, Cincinnati, Ohio; Rev. Joseph Husslein, S. F., St. Louis University, St. Louis, Mo.; Mr. Leo E. Keller, statistician, Brotherhood of Maintenance of Way Employees, Detroit, Mich.; Elizabeth Morrissey, professor, Notre Dame College, Baltimore, Md.; Very Rev. A. J. Muench, rector, St. Francis Seminary, St. Francis, Wis.; Charles F. Willis, circulation manager, "Federation News," Chicago, Ill.

Notably among such industries are listed the building trades, farming, coal mining, garment making and canning industries. This type of unemployment has received much attention in the last few years. Steps have been taken by the more forward looking concerns to face the problem and seek a solution. Many individual concerns and some trades have made notable progress along this line. The attempts to mitigate this evil either by reorganizing the work, introducing sidelines, modern sales methods and guaranteed employment furnish a whole interesting story, but it is not our story.

Cyclical unemployment—present with us in an acute form during the recent months—is today perhaps receiving the major portion of the attention by way of "prosperity reserves" and such. Cycles of prosperity and depression have been such a prominent characteristic of our modern industrial life that the most elementary student of the subject has a speaking acquaintance with them. In the alternating periods of prosperity and depression which confront us at fairly regular intervals we have a distinct challenge to human intelligence in its control of modern industrial life. It is to find a solution for the ills of this type of unemployment that the "best minds" are concerned today. We pause on the topic only long enough to differentiate this

type from the type which is our main topic for discussion. If cyclical unemployment remains a problem after the countless guns turned upon it today by scholars, statesmen and industrial magnates there is slight hope. Panaceas have been offered without number, everything from first-aid plaster to major operations have been suggested. Most of them—though highly recommended—are still to be tried.

We are not here concerned, however, either with seasonal or cyclical unemployment, both are passing maladies of the body politic, albeit serious—the one passes and recurs within the annual cycle, the other attacks at fairly regular intervals, perhaps 10 or 12 years between serious attacks, and less

formidable ones at intervals of about five years. But our unemployment resulting from technological changes is not a passing thing, here today and gone tomorrow, rather like the poor, "it is always with us." Not only is it with us, in season and out, but there are many serious students of the question who are convinced that it is becoming increasingly worse. Nor are so many remedies forthcoming and those suggested cut so deep that they are approached with caution. We are asking you this afternoon to stand apart for a few moments, from the general discussion of the whole question of unemployment and concentrate on this one phase, namely, the unemployment caused by technological changes.

Worker Must Pay

Technological unemployment, while a fairly recent term, is not a new phenomenon. As soon as the so-called industrial revolution of the late 18th and early 19th centuries was well begun, and machines of even the simplest variety replaced hand workers, the problem of unemployment because of technological changes had to be faced. Labor's early fight against the installation of machinery in the English textile industries was an almost instinctive reaction on the part of labor against what seemed to them an unmitigated evil. Then as now, society gained, but often at the expense of the individual laborer. This displacement of men by machines continued steadily through the 19th century with a constantly increasing speed, but the lowered costs of production incident to the greater efficiency of the machine so increased the demand for goods of all kinds that more men were constantly needed in one industry or another.

With the successful introduction of steam and water power, and oil and electricity the speeding up process and development of mass production increased so rapidly and wrought such momentous changes that we now speak of the "new industrial revolution." With the 20th century has come such a phenomenal increase in all forms of mechanization and reorganization that we stand spellbound waiting for what the future may bring. It is this rapid transition in industry that offers the reason for the persistent and insistent demand on the part of serious students that we face squarely the problem of the working man who, through no fault of his own, is displaced by technological changes. We are not maintaining that these changes are not beneficial to society as a whole nor that in many cases they have not opened up new and better opportunities for employment; that might be a matter of dispute but it is not a part of our discussion. We are here concerned only with the unemployment that results from this enormous and steadily increasing shift in the in-



DR. ELIZABETH M. MORRISSEY
Professor of Economics, Notre Dame College, Baltimore, Md.

dustrial field. Since the World War machines of almost uncanny ability, have developed at such an increasingly—were are tempted to say alarmingly—rapid rate that not even the most daring would venture to predict their limit. Changes in the 19th century were made fairly slowly and some time was given for readjustment to the new order. Some industries made rapid strides in mechanical improvements in one decade and some in another. It was possible for men to pass from one industry to another and find use for their hard-earned skill. New agricultural developments offered a constant refuge for those forced from the manufacturing industries by mechanical improvements.

Breathless Changes

In the 20th century, however, the rapidity of the changes leaves us breathless, and without fully grasping their social significance we pass over such statements as that offered in an official estimate that in the first quarter of the 20th century the physical volume of the products of farm and factory and mine and railroad increased two and one-half times while the population increased only 54 per cent. We have grown accustomed to the announcements day after day of new mechanical devices designed to release thousands of men from their occupation of a lifetime; to new mergers and reorganizations of industry that turn from their accustomed occupations men in all walks of industrial life, and this without

warning. These changes occur with startling rapidity and are all heralded as new goals in the race for efficiency without thought that they may carry within them the germs of serious social ills.

To drive home something of the force of the tragedies enacted daily which face the laborer and groups of laborers because of the mechanization and reorganization of industry, let us take time to quote some specific instances taken from the most reliable authorities. Many recent authors are quoting freely from Dr. George E. Barnett's interesting and exhaustive study† of the effect of technological changes on the glass bottle blowers. This is one of the cases in which the figures and conclusions are unquestioned and careful survey has been made. Until 1898 the bottle blowing industry was mainly a hand industry. Between 1898 and 1905 a semi-automatic machine largely displaced the hand worker though it called for skilled operators. By 1917 the Owens machine was perfected with an output of one machine equal to that of 54 hand blowers. The machine output now equals 90 per cent of the total of bottles and jars made. The skilled and semi-skilled workers in this industry decreased from 10,000 in 1905 to 3,000 in 1924. Of the 8,000 helpers employed formerly, nine-tenths of

them have been replaced by machines. The greater part of the loss was suffered in a nine-year period from 1908 to 1917. This is a fair example of what we mean by unemployment caused by technological changes. In this instance we have thousands of highly skilled men in a specialized trade displaced in less than one generation—in less than one decade. It is the position of such men that we are asking you to consider. Society profited in this case by the decrease in the cost of the product (that may or may not follow in all cases), but the laborer who had spent his lifetime acquiring the skill of his trade was forced to pay the cost of society's gain. That many of them found employment on other trades is no doubt true, but no one would be rash enough to claim that such a readjustment could possibly be made in so short a time without long periods of unemployment and perhaps employment at greatly reduced rates, but of that more later.

Those Who Are Poor Pay

If the displacement pictured concretely in the glass bottle industry were an isolated case the solution would be easy, but each industry in turn tells the same story that the gain to society as a whole through this steady technological improvement is paid for by those least able to bear the burden. Until recent years, one might almost say months, this cast-

† Barnett, George E. "Machinery and Labor".
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Electrical Workers and 24-Hour Highways

By GEORGE M. BOYD, Westinghouse Electric and Manufacturing Company

THE 25,000,000 autos traversing our roadways these days have thoroughly impressed the minds of every one with the importance, necessity and value of this form of communication. We are now realizing that the well-constructed roadway is one of the highways to greater civilization and material development. Never before has there been as much money expended on, and as careful engineering thought given to roadways as today. Better grades, more durable surfacing, wider roadbeds, less acute curves, banking and double pavements are being provided so that traffic will not only be unhindered but will be speeded up.

The uninterrupted and speedy flow of communication is as essential within our political body as it is within our human body.

Despite these great improvements, we still find certain serious defects in the movement of automobile transportation over our highways:

Traffic at present is a series of peak loads and deep valleys. The load factor should be increased.

There is the sun-down congestion, when people are rushing to get home at the end of the day in order to avoid the unpleasantness of driving against the glare of headlights. Who has not experienced the delay and irritation of long strings of automobiles after dark which have been slowed up by the uncertainty of unlighted highways?

Traffic congestion adds to the cost of living. Time is lost. Gasoline is burned uselessly. Property and life are being destroyed. It has been estimated that in New York City the cost of living is approximately one-third higher than in surrounding towns due largely to the great traffic congestions occurring there. One large concern in Chicago has announced a serious consideration of the abandonment of its auto delivery on account of these congestions wherein gasoline is wasted and men and equipment are tied up.

There is an enormous life and property loss at night which is out of proportion to the quantity of traffic: \$54,000,000 in property and 15,000 lives annually. Thirty per cent of our highway traffic accidents occur after dark when there is only 20 per cent of the traffic on the roadway. In Massachusetts, of 800 fatal and non-fatal accidents which were analyzed, 522 occurred during the day time, 20 at dusk and 258 at night.

A decided increase of crime is taking place on the highways during the night. There is no doubt

Local Union No. 77, Seattle, is active in pushing movement in state of Washington for illuminated highways. The technical and social aspects of this question are presented by the exterior lighting specialist of the Westinghouse firm.

but that the increase of lighting, street and otherwise, in the cities is driving the criminal to the dark highways where he can ply his trade with greater opportunities and easier escape. Dark highways offer the best conditions for him to operate. Unlighted highways also afford the criminally inclined hitchhiker greater temptations.

There are 24 hours in every day, 8,760 hours in every year. A check of travel revealed that the highways are being used only 12 to 15 hours per day or ap-

proximately 4,760 hours per year; 54.3 per cent of the hours in a year see 80 per cent of the traffic; 45.7 per cent, or 4,000 hours, during the year see only 20 per cent of the traffic. Immense investments in capital and maintenance are being used at an economic loss. Can this economic loss be remedied to any extent? Can our highways be converted from part-time highways to full-time highways? The answer is, by making night time driving approximate more closely the comfort, safety and speed of daylight driving.

The automobile headlight was necessary to extend the use of the automobile beyond the daylight hours. Yet the headlight produced such serious difficulties that it was necessary to legislate in reference to it. However, not even the laws regulating the type and adjustment of headlights have relieved us from the great glare-trouble, because—

1. Contours of the roadways cannot be regulated by legislation. Road bumps, vibrations, rolling roadbeds and hilltops will always cause the flashing of a blinding glare into the eyes of the oncoming motorist. An adjustment certificate cannot prevent a jar or road twist from putting headlights out of adjustment.

2. Defective headlights and cars with only one headlight will always be with us. It would be almost an endless task and call for a police force beyond economic reason to supervise and enforce headlight adjustment.

3. Insufficient (dimming) and improper (glare) lighting have been found to be the cause of 6 per cent of the night traffic accidents. Two thousand five hundred and fifty lives lost annually are traceable to these causes. Two hundred and two of the 800 accidents referred to above in the state of Massachusetts were due to improper lighting conditions. Also, Massachusetts found definitely during 1927 that 28 lives were lost in auto accidents the cause of which was unmistakably inadequate or excessively dazzling lights.

4. Even properly focused lights do not offer the safety necessary for night driving.

Horizontally, one's vision is limited to the beam of the headlight and prevents the seeing of human beings and animals on the side of the road which may be on the move toward the roadway.

The upper part of the beam of a properly focused light strikes the pavement 135 feet ahead of the car. It will illuminate only to the knees of a pedestrian 50 feet ahead. At 100 feet, a pedestrian in dark clothes can scarcely



Courtesy American Automobile Association

WILL THESE BE THE FIRST HIGHWAYS TO BE ILLUMINATED?

FOLLOWS THE SHORE OF PUGET SOUND. CHUCKANUT DRIVE, THE MARINE SECTION OF THE PACIFIC HIGHWAY, APPROACHING BELLINGHAM, WASH.

be seen. Take these facts along with the following:

An auto moving at 40 miles per hour is moving 59 feet every second. With four-wheel brakes and under the best conditions, it can be brought to a stop within 90 feet. The pedestrian, or an obstacle, at 50 feet is less than one second from the car.

At 45 miles per hour the car is moving 66 feet every second and the car cannot be brought to a stop under 112 feet. At 100 feet ahead there is only one and one-half seconds for the pedestrian to get out of the way and the driver to avoid him or an obstacle.

At 50 miles per hour the car is moving 73½ feet per second and cannot be stopped under 139 feet.

The conclusion is that a pedestrian at 50 feet is in danger and an obstacle is a menace to the driver, when the car is moving at legalized rate of 40 miles per hour.

At 100 feet when the car is moving at the higher speeds, pedestrians are in real danger and the driver is facing serious trouble on account of obstacles which may suddenly appear in his vision.

Furthermore, curves which are only dimly visible at 135 feet, to a fast-moving car, do easily become another cause of trouble.

Add to these conditions the absent-mindedness on the part of a large number of drivers and the slowness of action which characterizes so many and you have the explanation of many of the automobile accidents at night when the vision is limited to the 135 feet within the narrow confines of the beam of a headlight.

5. The fog which settles upon the roads in the northwest in such alarming density during the winter months has been the undoing of many an autoist. Headlights are useless. Oftentimes they become a danger as the fog particles reflect back into the driver's eyes the beams of his own light, completely killing any chance of seeing ahead.

6. Think also of the handicap surrounding a repair job on an unlighted stretch of road.

This means that under the present circumstances night driving will continue to be hampered by the unpleasantness of glare, slowed upon account of limited vision, and will experience an excessive number of accidents.

Since automobiles, of whatever kind, have become an important factor in our transportation system, speeds are being increased (and necessarily so) and the absent-mindedness of drivers must be recognized;

Since our wonderful highways are not being used to an economical limit corresponding to the money invested;

Since we have congestion periods which are becoming serious in their bearing upon economic losses;

Since there is a disproportionate and enormous property and life loss during night driving; and

Since our present method of lighting even with its regulations is not meeting the needs;

It behooves us to seek additional means of still further improving our highways so that they will be usable 24 hours in every day.

We submit that this can be done by a scientific illumination which will make travel easier, safer, and more rapid during the hours when travel is now at a minimum, and will stimulate the use of highways by the people at a time when it will not be interfering with their working hours. In short, make night travel comparable in convenience and safety to daytime conditions.

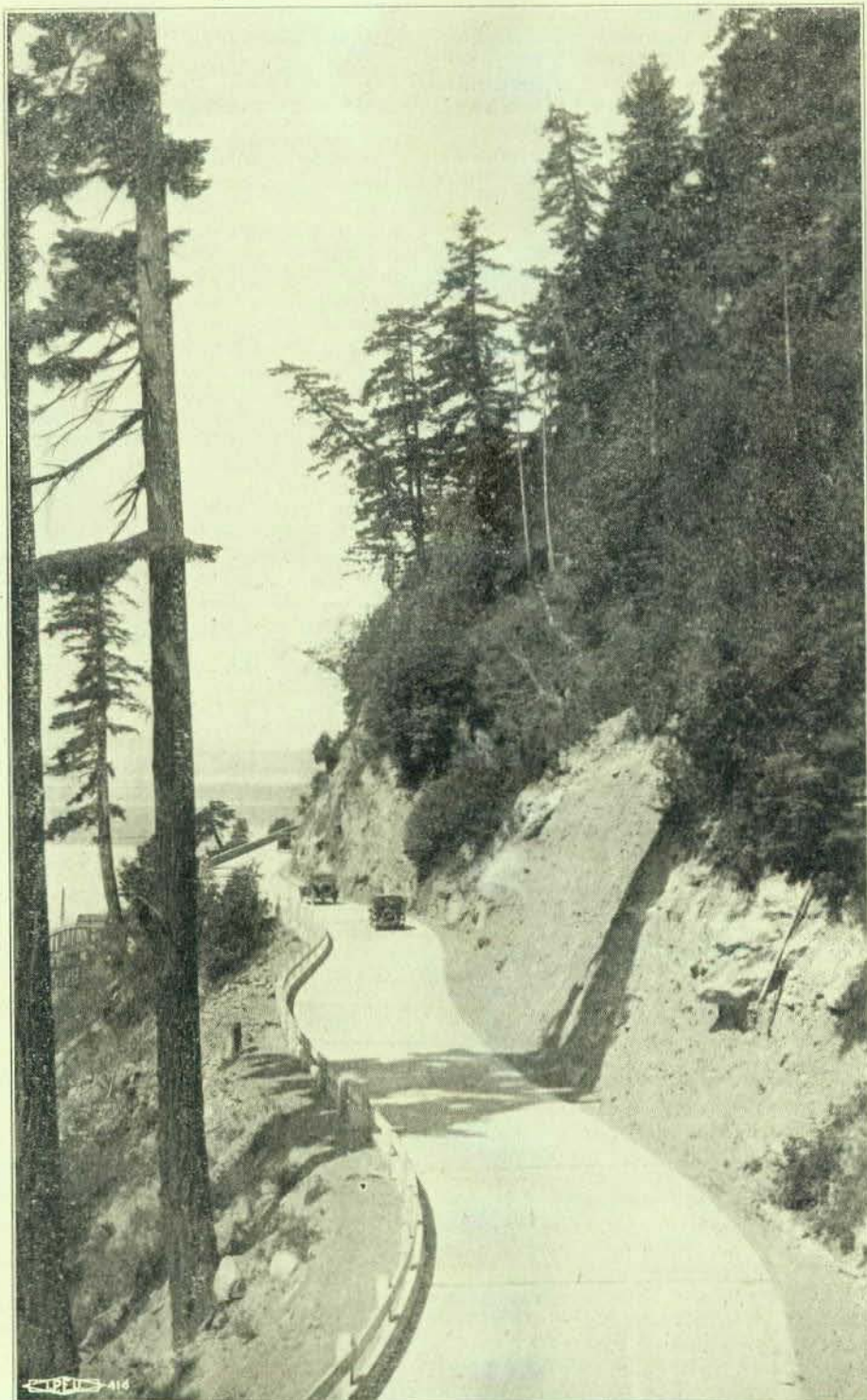
Any handicaps to the efficiency of our transportation system will weaken the very foundation of our highly organized commercial success and national life.

We are proposing, therefore, that a very definite step be taken to provide for the lighting of—

1. Our highways outside of cities, and
2. The highways or thoroughfares through the cities.

By providing scientific highway lighting:

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Courtesy American Automobile Association
CARVED OUT OF THE MOUNTAIN SIDE. ANOTHER SECTION OF CHUCKANUT DRIVE, APPROACHING BELLINGHAM.

Gompers Was Artist At Handling Men

By LOUIS S. REED, Author of "The Labor Philosophy of Samuel Gompers"

(Published by special arrangement with Columbia University Press)
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WHEN Gompers, young, incredibly energetic, a born organizer and leader of men, first came into contact with the American Labor movement in the early seventies, the movement was in a formative, experimental stage. Gompers at first was a socialist. But the impossible tactics of the socialists, their obsession with political action, their indifference to trade unionism and their emphasis upon ultimate ends, contrived to drive him away from that philosophy. He became a trade unionist, pure and simple, and as the skilled workers in this country were turning towards trade unionism to secure better wages and hours, made himself one of their leaders.

He was among those pioneers who discovered and developed those principles and policies which served as the basis of the movement's existence and growth. Trade unionism, attention to immediate gains, indifference to ultimate ends, action upon the economic field, craft autonomy—these constituted their formula for meeting the difficulties besetting the rise of a labor movement in this country. Looking back, one sees clearly the soundness of that formula. On no other ideological base could a stable labor movement have developed in this country at that time. The Knights of Labor, the Socialist Trade and Labor Alliance, the American Labor Union, the Industrial Workers of the World—the failures of all these movements "that have ceased to move" prove the unfitness, the untimeliness of their philosophies for the American labor scene, and in the same degree prove the essential soundness for their time and place of the principles upon which the American Federation of Labor was founded.

Born Leader of Men

Gompers, having participated in the developing of the right ideological bases, helped build the American labor movement upon that basis. In this work of pioneer construction, performed in the eighties, nineties and the first decade of the twentieth century, lies Gompers' major claims to greatness.

Gompers was an artist at handling men, at building and leading human organizations. Born under other circumstances than those which welded him to the working class, he might have become the head of a great corporation, or a great general, or the boss of a political machine. There was something that he loved about a functioning human organization. He was willing to leave others to play the role of opposition and critic. He wanted to be on the inside, to be at the helm, to administer, to build.

After he had helped make over the

A student of affairs views the life of Samuel Gompers from the critical point of view. His conclusions reached in the final chapter of "The Labor Philosophy of Samuel Gompers" presented by special permission of the author.

cigarmakers' union into a strong and stable body, Gompers played a leading part in the establishment of the Federation, of which he became the head. But the Federation in 1886 existed only on paper. The new body had no substance; it possessed no sense of solidarity; it had no traditions of existence and procedure. It was the loosest sort of federation—a federation of unions each jealous of its sovereignty—and formed by them so as to preserve that sovereignty against the encroachments of the Knights of Labor. To build up this organization, to get the unions to affiliate and to stay affiliated, to get them to co-operate with one another, to cultivate a sense of unity, to make the Federation count for something, these were the tasks that lay before Gompers. And he performed them well.

Old Master Himself an Organizer

Further, in those early days, Gompers as president of the Federation was a sort of organizer at large for the movement. The list of unions that Gompers helped to organize is long. He organ-

ized local unions, helped bring these locals together into national organizations, and brought these national unions into the Federation. Into one crucial situation after another he plunged, organizing, helping conduct strikes, counseling officials. He was short on theory and criticism, and long on practice and work. With the spirit of a crusader imbued with a flaming idealism, he slowly and perseveringly helped build a trade-union movement. It was not perfect but it existed and functioned. So much for Gompers' great service to the American labor movement.

For a time as a trade unionist, pure and simple, Gompers was tolerant of socialism. But gradually as a result of the criticism of the socialists and their attempts (some of them most foolhardy) to break the Federation, Gompers reacted to a position of most extreme hatred for them and their entire program. Thereafter he did all in his power to prevent the movement from adopting a socialist philosophy.

The post-war years witnessed an extension of Gompers' old program of strict business unionism. Labor's stake in increasing production was recognized, as was the necessity of making unionism more palatable to employers. Accordingly Gompers in company with other Federation leaders became an advocate of union-management co-operation, a practice already entered upon by several of the more forward-looking unions. At the same time, Gompers posed a new goal for the labor movement, namely, participation in the management and control of industry. Along with the voicing of this new aspiration, he criticized the running of industry for private profit and asked that industry subordinate profit-making to social service.

Suspicious of the State

By thus taking up these new ideals, Gompers at the very end of his career swung around nearer, in one sense at least, to the philosophy which he held at the very beginning of his trade-union life. The new program pointed in the direction of socialism. More exactly, it pointed in the direction of guild socialism, for to the last Gompers abhorred giving more power to the political state. Indeed the very manifesto in which Gompers declared labor's new aims is filled with phrases decrying the interference of the state in economic affairs.

So far as the development of Gompers' own ideas is concerned, this reorientation of his is interesting. But from the point of view of the effect of the new ideas and ideals upon the movement, it does not possess great significance. Essentially the new aims were radical, but Gompers set them forth in



LOUIS S. REED



GOMPERS MADE IMMORTAL IN STONE. NEW MEMORIAL TO BE ERECTED SOON IN WASHINGTON. SCULPTOR, ROBERT AITKEN, N. A. MAN AT SIDE INDICATES SCALE ONLY.

mild language, quite devoid of pugnacity. Also the new program was developed in connection with a conviction then held that the hired managers of industry would undergo a moral regeneration, run industry for the benefit of society and offer labor industrial democracy as a gift. The effect of these factors was to give Gompers' new aims more of the character of a prophecy than of a fighting faith. By setting forth labor's new aspirations with such absence of bellicosity, Gompers robbed them of substance. There is some evidence that the movement is expanding its old program, is becoming conscious of an aspiration to participate in the management and control of industry. But Gompers was too old, too physically spent to have been able to lead the movement down this new road.

Child of His Time

The dominating feature of Gompers' social philosophy was his belief in *laissez faire* or individualism, as he called it, voluntarism. He came to hold this belief chiefly by way of reaction from and hatred of socialism. Another major factor was the lack of sympathy shown by the state to the labor movement. In other words, the doctrine was his defence mechanism against the political impotence of the Federation.

Gompers' individualism was the individualism of Herbert Spencer. But whereas for Spencer the individual was the atom in his atomistic society, the basic unit in Gompers' individualism was sometimes the individual but more often the organized group. Life he thought of as a struggle for survival; society was but a name denoting strug-

gling groups. Each group cares only for its own interests, fights to advance those interests and lets the devil take the hindmost. Groups meet in battle in the market place. Here groups of workers sell and employers buy labor, and each participant strives to drive the hardest bargain. With this traffic organized society should have nothing to do, except to allow the contestants the fullest liberty of contract. Organized labor and its relationships to employers should be, as a general rule, entirely without the jurisdiction of the state. The labor movement should confine its demands for social legislation to the minimum. State health insurance, unemployment insurance and old age pensions were instances of state paternalism, and consequently bad. At all costs individuals should maintain their liberty and independence, and help themselves.

Of course, he was not absolutely consistent in his advocacy of this philosophy. When various organizations pressed for the legal enactment of desired conditions, or when he himself, as in the case of immigration restriction, saw that positive benefits could be secured through legislation, he did not hesitate to make use of the state. But these instances were exceptions to the general rule and were to be limited as far as possible.

These same principles of self help and individualism applied within the movement. In fighting socialism as a philosophy for the movement, Gompers was fighting a conception which would have helped to unify the movement. The victory of "no philosophy" and, later, "voluntarism" over socialism signalized the victory of separatism over solidarity with-

in the movement. For "no philosophy" meant no common aim or end for the movement as a whole. By so much, therefore, it meant the lack of a tie to hold the various groups together. "No philosophy" and "voluntarism" within the movement meant simply trade autonomy and bolstered that doctrine as the cardinal principle of the Federation. This latter principle meant nothing more or less than the right and duty of each trade to go its own way, to look out for itself, to fight its own battles, to solve its own problems in its own way, and to let other groups do the same. An injury to one is not an injury to all. If other working class groups are unable to press their own interests successfully, so much the worse for them. Jurisdictional disputes, restriction of members, sectionalism in politics, the absence of common policies and procedures in the face of common problems, no generalizations, these are all the natural corollaries of this principle. Holding to this principle, the movement in this country has hardly merited the title movement; it has been simply a congeries of groups. [Editor's Note: Here Mr. Reed's gift for interpretation seems to break down. He deduces much that is false from his general principle.]

Now Gompers' philosophy of individualism was congenial to the unions within the Federation, else they would not have permitted him for so long to have been their leader and spokesman. Self help is a slogan useful to those who are on top. Individualism is a philosophy espoused, at least under present conditions, by economic aristocrats. And from its foundation to the present day,

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Poison Pens Work Hard to Defame Union

EMPLYING similar phrases and similar unfounded arguments, attacks on the International Brotherhood of Electrical Workers, its locals, and its officials have been made in Los Angeles, Cincinnati, Milwaukee, Toledo and New York. Whether these attacks are anonymous, as they are in some cities, or whether they carry the name of "open shop" officials, they all turn upon the one argument that the union is engaged in activities in restraint of trade and in violation of law. This is the principal argument, historically and recently, of the League for Industrial Rights. Leaders of this anti-union group stated at its annual meeting last March that they planned new attacks on the International Brotherhood of Electrical Workers.

One guarded attack was made in Toledo by James Emery, counsel for the National Manufacturers Association, and an associate of Walter Gordon Merritt, of the League for Industrial Rights.

In keeping with the effort of these anti-social individuals and groups to arouse violent passions against this union, the libellers at present are bandying about the words "rackets" and "racketeering" in an effort to foster in the public mind the oft-repeated lie that organized labor originated and perpetuated the racketeering art of getting something for nothing.

Personal Attack Made

In Los Angeles, the attack was leveled personally against President Broach by the Los Angeles Times. In Cincinnati, there was a similar editorial at-

Slandorous attacks on International Brotherhood of Electrical Workers break out in many cities indicating a concerted campaign of libel, emanating from a single source. Most vicious attacks anonymous. Union is calm.

tack. In Milwaukee, the Open Shop Council devoted one whole issue of their official bulletin to pounding the progress of the local union, and Vice President Boyle. Loose statements prevailed. In Toledo, James Emery disported his legal cautiousness in fanning the flames of violence. In New York City, one J. D. White, an unknown, whose name fails to appear in the directories, reputed secretary of the Electrical Industrial League, with falsified address, said address given turned out to be police headquarters, issued an inflamed pamphlet, begging for letters to be sent to the district attorney purveying unsubstantiated allegations against Local Union No. 3, certain local officers, and President Broach. Those to whom this childish and criminally libelous document is sent are told in the district attorney's name, that "your name will be held strictly confidential."

The document is an appeal, not only to the lowest motives in human nature, those of vilifying characters under cover, but is also an appeal to a public

officer to accept as evidence the testimony of a sneak.

Speaking of these attacks upon the organization, Charles P. Ford, president of the International Executive Council, said:

"When a small group of men completed its meeting on the 28th day of November, 1891, and it was made known to the public that they had brought into existence the International Brotherhood of Electrical Workers, every selfish element in the electrical industry, regardless of from what standpoint or feature, was mobilized, and through those elements and other elements, such as business and professional men, was started a drive to stamp out and cause the immediate death of the organization which was formed for the purpose of bringing a few more of the necessities, a little bit of the comforts of life to those dependents of members following the electrical trade. Hysterical appeals were made from coast to coast, from the Canadian border to the Gulf of Mexico by selfish interests to do anything or everything necessary to prevent the growth of this menacing institution.

Union Will Endure

"Here again, right prevailed, which justifies my previous statement of abiding faith that right will prevail.

"The International Brotherhood of Electrical Workers was not destroyed, but rather it grew until today it is recognized as being the most sensibly administered, managed and operated organization of labor in North America. If it were only a small dragging institution, carrying a title only, and still resorting to the costly and obsolete methods of conducting its industrial relation policies with employers, no attention would be paid to it by the same selfish interests who opposed its birth and sought its death 39 years ago.

"Those who are now seeking to destroy the advantages which the Brotherhood of Electrical Workers has brought to the industry, in my opinion, will meet with no greater measure of success than did their predecessors who have sought to do the same thing for the past 39 years. True, they have inconvenienced, handicapped and deferred matters, but they cannot destroy."

"You will be interested in the reduction of the army from 90,000 to 50,000 and the use of 32,000 of these soldiers in the building of highways and dams. * * * The 125 million pesos taken from the army have been assigned to the Department of Industry, Public Works and Education. This should convince all that Mexico is doing her part toward the elimination of war machinery and educating her people for peace. The balance of the army is being used to police the country and for constructive public work."

—Jose Kelly.



W. N. DOAK, NEW SECRETARY OF LABOR, TAKING OATH OF OFFICE. FORMER SECRETARY—NOW SENATOR—"JIM" DAVIS WAS PRESENT. THE OATH OF OFFICE WAS ADMINISTERED BY SAMUEL GOMPERS, JR., CHIEF CLERK OF THE DEPARTMENT OF LABOR, AND SON OF THE LATE PRESIDENT OF THE AMERICAN FEDERATION OF LABOR.

International Joins WCFL'S World Family

WHAT pressure politics has failed to do, technology has done. Which means, that WCFL, the "Voice of Labor", has succeeded in surmounting the difficulties set up by rulings of the Federal Radio Commission.

The case of WCFL is well-known throughout the world. Now its voice is heard in every land. It has fought for a Class A channel on the air since its foundation, but has been discriminated against. Now its engineers have outwitted the class politician.

How this was done can not be completely told. It is enough to state that one of the most effective short wave broadcasting stations in the world was built in its entirety by members of Local Union No. 134, International Brotherhood of Electrical Workers, at about one-fourth of the cost charged for such equipment and installation by the usual agencies.

Maynard Marquardt, chief engineer, told this JOURNAL how.

"Mr. E. N. Nockels, secretary of the Chicago Federation of Labor and general manager of WCFL-W9XAA, should be given the credit for having the vision of seeing the future importance of the short wave channels.

"It is interesting to note that while the Federal Radio Commission has not as yet granted us the higher power for which we have been asking over a period of several years, in a sense the same thing was accomplished by the low power transmitter. When short wave receivers become common our little 500-watt transmitter will place our programs into the homes of this country, Canada, Mexico and northern South America with nightly reliability. That is more than any 50-kilowatt transmitter on the broadcast band will do.

Attracted Attention Early

"Two months after we were in operation we had already attracted so much attention among listeners that the International Short Wave Club, with headquarters at Klondyke, Ohio, asked us if we would co-operate in an international text program. This club is composed of approximately 4,000 members in 35 foreign countries. They are all active short wave listeners and experimenters. On the 4th of October we broadcast the first international test program running from 10 p. m. until 7 a. m. E. S. T. This brought the letters which you looked over while I was in Washington. They give a very good idea of what can be done in a one night broadcast over a station of only one-half kilowatt.

"Our present wave length of 49.34 meters is best for night transmission. We are soon to place in operation another transmitter on approximately 26 and at times on 17 meters. This will be good for reaching around the world during the day time hours in Chicago. We have now been heard in Tasmania, New Zealand, Australia, Hawaii, Union of

Short wave receiver installed at 1200 Fifteenth Street, N. W., Washington, gives Brotherhood contact with world.

South Africa, Uruguay, Brazil, Colombia, Venezuela, British West Indies, Barbados Islands, Virgin Islands, Porto Rico, Dominican Republic, Cuba, Canal Zone, Costa Rica, Honduras, Mexico and all over Canada. In Europe we have been heard in England, France, Holland, Germany, Sweden and Italy. Never a day passes but what we get several letters from foreign countries and on one day we received 12 letters from New Zealand.

"The purpose of our experimentation with short waves is, first of all, to establish the fact that labor is willing to do its bit in pioneering in the high frequencies and that Mr. Nockels realizes the international scope of labor's activities and that these high frequencies present the opportunity for an "International Voice of Labor" which is our slogan for our short wave transmitter. You may say that we spared no engineering effort and no expense to make this transmitter as fine as possible. You may also say, as was shown by the letters which you read, that we are beating other transmitters of many times our power which after all is the 'proof of the pudding'."

Reached Round World

On one test program the following countries and cities were reached:

COUNTRY	CITY OR TOWN
Australia	Sidney, New South Wales
Australia	Wauchope, New South Wales
Australia	Sidney, New South Wales
South Australia	Adelaide
Australia	Winton, Nth Zld.
British Guiana	Georgetown
British West Indies	Barbados
British West Indies	St. Vincent
British West Indies	Trinidad
Canada	Winnipeg, Man.
Canada	Halifax, N. S.
Costa Rica	Heredia
Cuba	Caibarien
Cuba	Guines
Cuba	Havana
Cuba	Jovellanos, Matanzas
Cuba	Santiago
France	St. Jean de Luz
Germany	Ferna, Kr. Worbis
Germany	Recklinghausen
Germany	Saarlouis
Holland	Deur, near The Hague
Territory of Hawaii	Honolulu
Mexico	San Angel, D. F.
Mexico	Mexico City
Mexico	Mixcoac, D. F.
Mexico	Pachuca, Hgo.
New Zealand	Beckenham, Christchurch
New Zealand	New Brighton, Christchurch
New Zealand	Spreydon, Christchurch
New Zealand	Dunedin, Christchurch
New Zealand	Gisborne
New Zealand	Lansdowne, Masterton
New Zealand	Tadmor, Nelson
New Zealand	(Hikurangi, Whangarei)
New Zealand	(North Auckland)
New Zealand	(Tauhoa, Kaipora Line)
New Zealand	(North Auckland)
New Zealand	Palmerston North
New Zealand	Tangiwai, Main Trunk Line
New Zealand	Via Waitara, Taranaki
New Zealand	Timaru
New Zealand	Lower Hutt, Wellington
New Zealand	Karori, Wellington
New Zealand	Newtown, Wellington
New Zealand	Northland, Wellington

(Continued on page 47)



PRESIDENT BROACH AND SECRETARY BUGNIAZET RECEIVE FROM MAYNARD MARQUARDT, WCFL'S CHIEF ENGINEER, THE SHORT WAVE APPARATUS.

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Devoted
to the
Cause



of
Organized
Labor

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No. 1

A Look Ahead William F. Ogburn, University of Chicago, ventures to draw a picture of the world called the future into which we are travelling—some say—with the speed of an express train.

Disclaiming title of prophet, he quietly summarized the major trends of the present, and wisely extended them into tomorrow. Some of these forecasts are important.

First, the world of tomorrow is to be a swiftly changing world.

"In other words, inventions and scientific discoveries are accumulative, and, as the pile accumulates, more and more inventions are made, since they do not appear to be restricted seriously by the limitations of human wants.

"So in the future environment of man, one sees an increasing number of inventions and discoveries occurring with greater rapidity. This, of course, means change."

Second, the world of tomorrow will demand originality on the part of those who lead.

"But in a society undergoing great change there is little guidance to be gained from the past. The situations that arise are new and ethical conduct is a matter of intelligence and forecast, and the fixity and detail, right and wrong, give way before social expediency."

Third, the world of tomorrow will be a mechanized world.

"The technological progress, which will be advancing even more rapidly in the future, will, of course, not be confined to cities, but will spread to the countryside. Farm and factory joined together on the same land may well be in prospect. Where the foodstuffs grown yield by-products, factories for obtaining these by-products may be located near the farms, since electric power will be readily available.

"The folkways and manner of living among farmers will resemble more what they are in cities. Such is the magic of the newer methods of communication. Technological progress will mean, however, only a slight substitution of production in the chemical industry for production by the soil, sun and rain, since the latter are not costly."

Fourth, the world of tomorrow will be an organized world.

"It may also be expected that the heterogeneity of the future material culture will call forth a great variety of organizational effort. The simplicity of the social organization of pioneer days is gone. Organization is a remarkable tool for getting things done and the law of survival will mean a great organizational development, despite some sacrifice of personal liberty and individualism, characteristics which may have a variety of ways of expression."

One comes away from hearing Dr. Ogburn's address quite satisfied that this organization is moving with and not against the current. But we feel that Dr. Ogburn did not say enough about possibilities of control in the interest of humanity in the days to come.

A Ground For Hope Some time during the fading hours of the old year, a radio orator from London addressed an audience in the United States. At that moment, the clocks in New York were five hours ahead of the clocks in London. With the origin of radio, time—that invulnerable binder of men through the ages—was abolished. At about the same time, in the waning days of the old year, Professor Einstein came to the United States to remind us with vivid force that he had abolished space. So, in the new world, it appears, neither time nor space exist.

All this is metaphysical—loony, if you will—but it recalls again to our minds that we live in a changing world, a world of strange realities beyond the realm of fact, and a world of brute realities in the realm of fact. Change is all about us, and to exist at all an individual or organization must acquire a talent for adaptability. It is this talent for adaptability that the electrical workers' organization has proved it has. This is the meaning of 1930 for electrical workers. In a year of heavy business reverses, this organization has done two important things: one, it has met the economic storm and weathered it, proving it can take care of its own; two, it has quietly made changes in its structure, important changes, that will bear fruit in years to come. In these, there is ground for hope.

Employers Receive Doles Strong words—frank facts—are told American business men by Dr. Sumner H. Slichter of the Harvard School of Business Administration, in the last New Republic of 1930. Dr. Slichter declares employers are receiving doles—not the unemployed. "But the real recipients of the dole are not the men who stand for hours before the Salvation Army soup stations, or who line up to receive a nickel from the Franciscan Fathers at the Church of St. Francis of Assisi, or who receive orders for food from the precinct captains or jobs in the parks through the A. I. C. P. The real recipients are the great industries of America. They are extracting a percentage of the meager pay of tens of thousands of their employees, obtaining myriads of contributions from churches, charitable organizations, the Salvation Army, city employees, commission merchants, hotels, coal dealers and thousands of business and professional men in order to pay their labor overhead. If anyone is being pauperized and demoralized by the dole, it is industry no less than the men in the soup lines. Industry pays dividends on idle capital. In order to do so, the corporations of the country, according to the estimates of the National Bureau of Economic Research, save, on the average, approximately 40 per cent of their net profits. In 1921, corporations engaged in manufacturing, according to the estimates of the Bureau, experienced net losses of approximately \$101,000,000. Nevertheless, in this year they paid dividends on their common stock of over a billion dollars. In order to meet the emergency caused by the depression they reduced their wage payments about 39 per cent below 1920. But they found it necessary to reduce dividends on common stock only 12 per cent. Why should not the policy of building up reserves to continue payments during period of depression be applied to labor as well as to capital?"

A Seventh Century Mind Mr. John E. Edgerton is president of the National Manufacturers' Association.

That organization has played an important, if baneful, part in U. S. affairs. It has secured high tariff rates for its members, headed off child labor legislation, and fastened upon statute books laws that fit into a highly individualistic philosophy. The National Manufacturers' Association represents probably ten billion dollars of capital. To head this organization one would expect to find a gentleman of intelligent toryism, with some sense of responsibility to society, even as had the old Tories, and if not these virtues, to have the good sense to hide his own misshapen economic philosophy. Not so, Mr. Edgerton. With cheerful effrontery he went to the conference on "Security in Industry," sponsored by the Academy of Political and Social Sciences, and exposed his mediæval brain in all its dreadful nakedness.

"A depression is an act of God," said this Mr. Edgerton. "In such a time as this, workmen should go home and read their Bibles and the Constitution of the United States. Then they should immediately start saving against the next inevitable slump in business."

New Business Speaking of residential wiring, the United States Department of Commerce just reports that one-third of the homes in the nation are not yet wired. One can readily see that much new business, as well as old business in the repair field, lies in the residence branch of the industry. In January, 1929, 19,012,664 homes were wired for electricity. By January, 1930, this figure had jumped to 19,721,486. It is estimated that 20,000,000 homes are now electrified. Yet 10,000,000 still need to feel the enlightening touch of the magic genii. Naturally it is the homes in suburbs, and outlying districts which still await the coming of modern lighting, and it is to this outlying business that the union and the electrical contractors must turn, and serve.

Role of Banker American bankers have backed Pilsudski in Poland, Horthy in Hungary, Machado in Cuba, Leguia in Peru, and Borno in Haiti—all dictators. They have given financial encouragement to Mussolini in Italy and Primo de Rivera in Spain. They have preferred autocrats to democracy, or even to republicans. Is it likely, then, that they can rise to the present world emergency, and help bring world trade back to health? According to John Maynard Keynes, British economist, the present depression is a banking problem—it can be solved only by public spirited, swift, intelligent action by banking agencies. But Keynes calls upon Federal Reserve banks for action rather than upon banker backers of dictatorships.

According to Keynes (December FORUM) the present situation is induced by the reluctance of lenders to lend money at low enough rates, and the fear of borrowers to borrow at all. The two must somehow be gotten together, or the depression is likely to sag into a prolonged darkness of business retrogression. He warns that "Neither the restriction of output nor the reduction of wages serves in itself to restore equilibrium." The problem is deeper. One of proper financing—financing touched with intelligence and public spirit—

in short, service that the private bankers have up to this time failed to give.

Economic Illiteracy An investigator returned from Detroit reports that he talked with hundreds of men in breadlines. What they told him revealed the colossal economic illiteracy of the average American workman. "It's all my fault," they, one after another, told him, "that I am here. I should have learned a good trade when I was younger." Not a word about economic systems, or of responsibility of management. Even in the time of economic misfortune, an experience you would expect to bring disillusionment and sober reflection, all he could do was to slip into the attitude of "rugged individualism" characteristic of his uppers.

What the Detroit workman no doubt had in mind when he said he should have learned a trade was the organized industries. These appear to be well-off in his eyes, and he attributes their success to skill of industrial workmen. He is wrong. The men on the railroads, in the building industry, in the theatre, in certain of the manufacturing industries are well enough off because they have learned to share their troubles and advance their desires through co-operation. That is all. They would be as badly off today, in most part, if they had not their unions to fall back upon. The union is not only an instrument of protection, but an agency for positive construction, and above all else it aids in removing that awful blight of economic illiteracy from the workers' minds.

Fundamental Causes Brother E. H. Boeck, St. Louis, is anxious that this Journal should enlighten its readers on what causes industrial depressions. Brother Boeck believes that we have not been fundamental enough in our discussions, and urges us to give space to the so-called single tax philosophy. He declares:

"Electrical workers should know that where there is an effect there is a cause for it. Labor and capital produce all wealth and they can only produce on land. The division of wealth goes to labor as wages, to capital as interest and to the ground owner as rent for land.

"Land is already here, labor or capital did not produce it, nor can they add one bit to it. In new countries there are no land values and interest and wages are both high. Just as population grows so land values also grow, so land values come by the mere presence of the people.

"Labor and capital should get their total production. With the abundance of wealth in the world, the people can not possess it, because their purchasing power is only half their productive power. The ground owners get the other half without earning it. Therefore labor and capital both are victims of our stupidity, that permits the land owners to collect land values which we all make.

"When we see the social structure as it really is and how it works we will see why the rich get richer and the poor get poorer. We will understand why labor stands idle and capital wastes, with no productive returns. Hard times come from the unnatural state that is keeping man from the land, his birthright. This is the fundamental wrong that can only be righted by taking the land values we all make for all.



WOMAN'S WORK



REFLECTIONS FOR THE NEW YEAR

IT'S over—the saddest Christmas many families have ever known. The public has tried to help, and holiday cheer has been provided, but it is a tragic experience for self-respecting people to sit down to a Christmas dinner provided by charity, and for their children to wear the cast-off clothing donated by more fortunate citizens.

Unemployment is now at its peak, according to President William Green of the A. F. of L. The Federation's statistics showed the usual drop of employment in the first two weeks of December, and their estimate, based on government figures and their own, is 5,300,000 out of work. But there is usually a drop in employment in December, and this year the decrease is not so great as the usual percentage, among union workers, at least. Last year the decrease from November to December was 28 per cent, while this year it was only 5 per cent. From this Mr. Green augurs that perhaps the crisis has been passed, though he says we cannot hope for any general improvement before March. Among the nonunion workers, according to the Department of Labor, there was even more than the usual seasonal decrease in employment from November to December.

Congress gave President Hoover everything he asked for the relief of unemployment and agricultural distress, and something more for good measure. The President declares that there will be \$724,058,000 available for government building during the coming year, where ordinarily only about \$275,000,000 is spent.

Salaried people, even those who are employed, are beginning to feel the pinch. Instead of the usual raise or bonus, many large corporations made their salaried employees a Christmas present of a general cut in pay. This will not help to relieve the depression, for it cuts the buying power of these people.

Industrial America is like a man going down a slippery road in a fast car. We were going too fast, producing too much, gambling up stock values sky high, spending our money, and generally riding wild. Then we went into a skid. The driver nervously twisted the wheel to the left. Production was cut down, employment dropped, banks failed, and we're skidding worse than before. Now if the driver can do it, he is going to turn to the right, but very carefully, and we are going to slow down and try to get back into the center of the road and go ahead. Perhaps after we get straightened out we can clear off the

road, or put on the skid chains, but right now we're in a dangerous position and if we get hysterical we'll end up in the ditch.

Who is to blame—the car—the road—or the man at the wheel? The road has no choice but to be what it is, and the car has no choice but to do as the man directs. But if the car goes in the ditch it will take him with it. He is beginning to realize that now. He may drive more carefully, if he can only stop skidding. We might think of that man at the wheel as representing the overlords of industry.

The driver begins to understand that he should have put on the chains; and the industrial rulers give signs that they realize that something should have been

done to safeguard the welfare of workers. And that road—the avenue from producer to consumer—it ought to be smoothed out, cleared off, some of the curves taken out of it.

The individual worker finds out his own unimportance to the world when he has been out of work for a year or more. Never has the individual been of less importance than now. Even the individual business or corporation has to band with others of its kind into a super-corporation in order to survive. The worker—if he thinks at all—must now realize that his hope of salvation is in joining with the mass of his fellows, and in banding, binding, welding himself with the others into a union that will act for the good of all.

Unemployment and the Child

"Of course, we know, you know, and I know, that everybody that is unemployed suffers during a period of unemployment, but we also know that those who suffer most are the children of the unemployed, because, of course, the conditions are such that the period when they should have the things that they need this year passes this year. You can't feed children skimmed milk this year and make up by feeding them cream next year. What they didn't get this year you can never make up to them, and there are great numbers of children all over the country that aren't getting even skimmed milk this year, for whom the milk ration was long ago stopped; and in the files of the Children's Bureau we have record after record of that kind of family.

"What does it do to children? It, of course, sends them into manhood and womanhood more subject to tuberculosis, more subject to disease than they otherwise would be; but it also does something to them that I would leave to our friends the psychiatrists to explain, when they live day by day without knowing what tomorrow is to bring forth. Children need not only food and a comfortable home, but they need above all things security, and there are many children who have not known security in their homes for over a year.

"There are many families that will not be taken care of by charity this winter, for which the family standards have gone steadily down. First, the payments on the home began to be stopped, and then the home went, and the furniture went, and the credit was exhausted at the grocery store, and then the family moved in with another

family, and they shared as they could, and circumstances were such as to produce almost nothing at all to share.

"You can never make up to those children for that. They are permanently marred by the experience that they are having this year.

"Of course, there is no cure for unemployment except employment, and we have got to insist to our financiers and our industrial leaders that they have got to find a remedy for industrial depressions, just as we say to the doctors you must find a method of preventing cancer or tuberculosis, or any other disease; and nobody should rest satisfied until those goals are reached."

MISS GRACE ABBOTT,

Chief of the Federal Children's Bureau, at the White House Conference on Child Health and Protection.

Another Auxiliary!

Congratulations, Local No. 292, Minneapolis! This local has joined the progressive group that believes in being completely organized—including mothers, wives, sisters and daughters! The auxiliary organization was planned by the local, with an auxiliary committee that gathered the women folks together and got things started. Temporary officers have been elected and 32 members enlisted for a beginning. We expect to hear from Minneapolis auxiliary in the correspondence section soon, and in the meantime we, and all the other auxiliaries, of course, are wishing them good luck.

MIDWINTER



Cotton suede cloth, a glove fabric, featured in a youthful lumber jacket that is worn with a velveteen skirt. Courtesy of the Cotton Textile Institute.

Muskrat and Persian lamb are skillfully combined into a beautiful coat by union fur workers. Photo below by courtesy St. Paul fur workers locals



PE
ICE

CONSTRUCTIVE HINTS

Soapstone

Soapstone on a wire-pulling job saves muscle. By applying soapstone to the feeders the pull-in is much easier and the tendency to bind, which causes a hard pull, is eliminated. Wax or axle grease or auto grease is also valuable when pulling in lead-covered cables.

Air Circuit Breakers

The air circuit breaker is used almost invariably as an automatic device to prevent harm to machines or other electrical apparatus, which might result because of abnormal conditions in the circuit. These abnormal circuit conditions may be short circuit or overload, underload, reversed current, undervoltage, overvoltage, unbalanced voltage in three-wire systems, phase reversals, etc. In some cases the breaker may be a self-contained piece of apparatus which will open automatically and at once upon the occurrence of an abnormal condition, while in other cases the opening of the breaker may be delayed for a time, or it may be caused to open by the operation of some other device, such as a limit or a push button switch or relay, a speed limit device, etc. However, any alternating current relay which will function to trip oil circuit breakers may be employed in a like manner to trip open an air circuit breaker by the simple expedient of using with the air breaker a shunt trip or undervoltage device, where the coil will be energized or de-energized as required by the closing or opening of the relay contacts. For both alternating and direct current circuits of moderate capacity where severe overload or short circuit protection only is desired, the circuit breaker has a rival in the fused switch because of its small initial cost; however, where the conditions of operation are such that overloads may be of frequent occurrence, the breaker will be cheaper in the end on account of the cost of fuse renewals. At the same time better protection is afforded by the breaker because the breaker not only can be calibrated to trip at predetermined loads, but also assures greater continuity of service. The manually operated breaker is the type most commonly used. By the use of remote control breakers the station wiring can often be laid out to much better advantage, resulting in a large saving of copper. For such conditions solenoid operated breakers are available.

Long Bit Extension

At times it becomes necessary to extend a bit to six, eight or 10 feet long in order to bore a hole through a partition from ceiling to the floor below. This can be done by using the right size of gas pipe to accommodate the bit size. With the bit fastened to the first length of pipe the bit can be turned with a Stillson wrench. Other lengths of pipe can be coupled to the first section until the bit comes through the bottom of the partition. By using an expansion bit three or four circuits of one-half-inch pipe or BX cable can be provided for.

Portable Test Meters

The question of periodical meter testing is of vital importance to every central station or isolated plant, since the revenue received

depends upon the accuracy of the meters used. The use of the portable testing meter is recognized as the best and most efficient way of testing service meters. The time and labor-saving features which result in increased efficiency are obvious. Moreover, the use of the portable test meter results in greater accuracy, as errors due to fluctuating voltage load, personal errors, etc., are minimized or eliminated. The test meter combines in one standard several capacities, covering a range from light load to full load, making possible rapid testing, since no time is lost in changing standards. In using the test meter constant load is unnecessary since the only observations required are the number of disc revolutions of the meter undergoing test and the pointer indications of the meter before and after test. Personal errors of observation are practically eliminated.

Foot Candle Meter

The foot candle meter is a small, self-contained instrument which measures illumination intensities in foot candles. This unit is rapidly becoming recognized as the popular as well as the scientific measure of intensity in illumination, which makes the application very practical. Technical knowledge is not required in the use of the meter because the adjustment is very simple and determinations are readily made. The foot candle meter meets a long-standing demand for a small portable instrument which can be used for measuring the light delivered in the work. This effective light is what the consumer actually pays for and is therefore the only kind of illumination in which he is interested from a commercial standpoint. Factory tests have proved that higher intensities than those now in general use result in improved labor conditions and increased production.

Drop Cloths

Drop cloths come in handy on old house jobs. All of the dirt and grit are caught in the cloth and time is saved in cleaning up the job.

Flow Meters

Flow meters provide a means for accurately measuring the total flow of steam, water, air, gas, oil, etc., through pipes or closed conduits, and so furnishing information of great value in the economical management of any manufacturing industry or central station.

Electric Lead Burner

Electric lead burning, the new and modern way, has many advantages and conveniences over other methods. A burner has been designed especially for lead burning in the repair of starting and ignition batteries. The equipment is portable and complete weighs approximately 25 pounds.

The equipment may be connected to any alternating current lamp socket by means of an attachment cord. A current transformer supplies a heavy secondary current. One secondary lead connects the transformer with the lead to be burned. The other secondary lead is connected to a carbon holder which is used to produce the arc.

Some of the other uses of this outfit. Soldering and unsoldering terminals and splices, cutting thin gauge metal, certain kinds of tinsmith work, etc.

Vacuum Fishing

On difficult conduit runs where on account of sharp or too many bends the fish wire cannot be shoved through do this: Use an ordinary vacuum cleaner and by its sections draw a thread or string through the pipe by suction. A small ball of cotton or fine paper should be made on the thread or string for extra suction area. With the thread or string through the conduit pull a heavier cord and then the fish wire can finally be pulled through. Before pulling in the wire rub well with soapstone or talcum powder or tire talcum.

Estimating Job Plans

A convenient tool to estimate circuit lengths on plans is a great time-saver. A small watch-like meter is on the market by which lengths of circuits can be measured regardless of the scale to which the plan is drawn. By running the scaling wheel of this meter over the plan the revolutions are recorded and the actual lengths are determined in feet.

For estimating materials required to do a job, this tool pays for itself on the first job it is used.

Small Isolated Plants

The demand for farm power and lighting and for small, isolated, electrical plants is chiefly for a direct connected plant consisting of an internal combustion engine direct connected to a generator. The speeds of the prime mover vary greatly. The mechanical arrangement also differs widely.

Alternating Current

An alternating current is one which rises in strength to a maximum in one direction, then subsides and reverses, rises in strength in the opposite direction and again subsides, repeating this complete set of changes over and over immediately in equal periods, just as the tide flows.

Three Conductor Cable

With three conductor treated paper insulated lead cable, the lead sheath is applied as soon as the cable is impregnated. As the life of the cable is absolutely dependent on the integrity of the waterproof jacket, only commercially pure smelted lead is applied at the proper temperature, thus insuring lead sheaths of the proper thickness, free from imperfections. Lighting or power cables are ordinarily sheathed with pure lead but they can be furnished with a tin or antimony. Both are costlier coverings.

Lightning

In the case of direct strokes, where the discharge from the cloud to the ground terminates in the electrical system, the rate of power flow is so high as to be destructive regardless of the protective means. Whatever is struck, pole, conductor, transformer, or arrester, is very likely to be destroyed. While this sort of disturbance is within the sphere of lightning arrester application, no device has yet been made which will afford protection. Little is known as to the actual intensity of direct strokes except that they are beyond the range of protective equipment.

EVERYDAY SCIENCE

Fuel Must Supply Bulk of Electricity

According to the *Electrical World*, the potential water power of the United States available 90 per cent of the time amounts to 34,818,000 horsepower. If all the flow available at least 50 per cent of the time is included, the total comes up to 55,030,000 horsepower. Compared with this there had been developed, at the beginning of the current year, 13,571,530 horsepower, of which only one-eighth was in manufacturing and miscellaneous plants, seven-eighths being operated by public utilities. Only in the East is any considerable fraction of the water power directly used by industry.

Since the actual economically justified installation at a site is often well in excess of that corresponding to the flow during 50 per cent of the year, we might seem to have gone only a short distance in making use of this important natural resource.

But analysis by geographical regions puts the matter in a different light. More than two-thirds of the country's potential water power is in the 11 western states; close to 24,000,000 horsepower on the 90 per cent basis; 36,773,000 horsepower on the basis of a stream flow available half the year. Although this region includes great individual projects and its combined installations, totalling 4,403,000 horsepower, comprise nearly a third of the whole, it remains the area of greatest undeveloped potentialities.

Unfortunately for its early utilization, the country's center of population is 1,000 to 1,500 miles to the east, in Indiana, far beyond the present range of feasible electric power transmission.

Other than in the west the margin between developed and undeveloped power is much smaller. In some sections the installed capacity has passed the potential output available 90 per cent of the time and is not far short of what can be had only half the year. Future demands will thus lean more and more on steam.

New England has a total of potential waterpower, available 50 per cent of the year, amounting to 1,978,000 horsepower. Of this, approximately 1,650,000 horsepower has already been developed. This developed horsepower is roughly divided—about 900,000 horsepower in public utility plants, and the remainder in manufacturing plants.

Suspension Bridge Carries Gas Main Across Creek

In constructing a natural gas pipe line in Oklahoma it was necessary to carry the main across a creek subject to wide variations in stream flow. In order that there might be no interruption of gas service the company constructed a suspension bridge, with a 340-foot span, to carry two 12-inch pipe lines over the creek, and three 10-inch pipes were buried far below the bed of the creek.

Another notable case of carrying a gas line across a stream is that which was completed recently at Poughkeepsie, N. Y., where an eight-inch high pressure pipe was laid across the bed for the Hudson River. This pipe was tested to 350 pounds pressure per square inch. Nitrogen gas was used for this testing. The pipes were welded by the oxy-acetylene process, in 80-foot lengths, and loaded onto a barge. To connect these lengths a 36-inch length of nine-inch pipe was placed over each end

and solidly welded to longer sections. A car ferry barge 280 feet long was used, so that three of these 80-foot sections could be lined up and welded together into one piece preparatory to laying. When the first length has been completely welded and tested, the barge was pulled out into the stream and the pipe hauled backward by means of rollers. As soon as one 80-foot length was clear of the barge, another section was rolled in place and welded to the pipe, and the operation continued until the complete line was laid.

It was necessary to buoy the pipe in the water by means of pontoons to prevent sagging, until a sufficient length was laid to enable the pipe to be lowered to the bottom of the river. A total of about 5,700 feet of pipe was used in the crossing, and the time occupied, 11 days. After completion, a pressure of 150 pounds per square inch was applied to the line for 12 hours without any loss, indicating that the welding job was perfect.

Electric Refrigerators Put on Style

With the advent of the use of electricity for refrigeration in the home, it is now possible to get a refrigerator finished in rare woods to imitate any piece of furniture, like a sideboard, library table or cabinet, part of which is fitted up with an electrical refrigerating unit to keep food and drink easily accessible in dining-room, living-room or den. From all outward appearances the refrigerator is simply a good-looking piece of furniture with an obvious use and a hidden one of refrigeration.

Electric Railways Will Spend Over \$1,000,000,000 in 1930

According to figures prepared by the electric street railway industry, in response to a request from President Hoover, 97 per cent of the companies do not anticipate any change in business conditions which will affect expenditures during 1930.

At the present time, there are 637 companies operating street cars, rapid transit systems, interurban electric lines and bus lines in all sections of the country. They have a capitalization of \$5,419,264,000. They own 40,800 miles of single track, and operate 92,000 cars and 11,860 busses. In 1928 they carried 15,050,000,000 passengers on street cars, and 950,000,000 in busses.

In 1930 these companies will spend about \$150,000,000 for new construction, chargeable to capital account. This is an increase of \$43,000,000 over 1929. An additional \$240,000,000 will be spent for renewals and maintenance of existing facilities, which is also slightly more than was spent in 1929. This makes a total expenditure of about \$390,000,000 in 1930 for the purchase of materials and the employment of labor in construction and maintenance.

In addition to these expenditures, these companies will spend approximately \$680,000,000 in operation, of which about \$442,000,000 is for labor.

At a meeting held at the American Electric Railway Association's headquarters in New York, on November 26, 1929, representative executives of companies operating in various parts of the country expressed their confidence in the business outlook and their desire to co-operate in every possible way with President Hoover in his effort to stabilize and insure the continued progress and de-

velopment of business. As an industry, they welcome the opportunity to co-operate with other industries through the United States Chamber of Commerce and feel that a conference of this kind may have far-reaching effects in bringing about greater realization among all business groups of the interrelations of the country's economic structure.

In most large cities and many smaller ones as well, all business faces the problems of congestion and deficiency in efficient local transportation. These are community and public problems that require the application of sound principles for their solution. Street railway companies operating various forms of community transit are endeavoring to improve their facilities and service despite a long period of inadequate earnings and consequent restricted credit. They see nothing in the immediate business outlook that may be expected to change their plans for 1930. But in addition to the figures cited above, a better public understanding of the economic problems involved would open the way for major expansion of facilities that is needed in many cities.

Seasonal Effect on Cost of Electricity

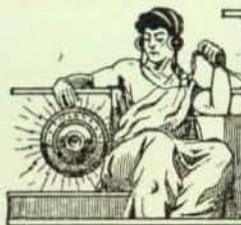
While the average cost of electricity in the United States is steadily declining, there is also a big seasonal difference in the revenue per kilowatt hour received by electric light and power companies throughout the year.

According to statistics prepared by the National Electric Light Association, the average revenue for all electricity sold in the United States in January, 1929, was 2.78 cents per k.w.h. This average revenue declined steadily through August when it fell to 2.37 cents per k.w.h.

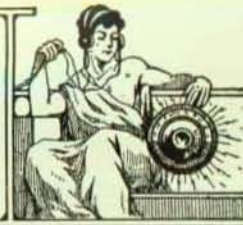
As the days decrease in length, the use of electricity for lighting increases and the average revenue per kilowatt hour will again rise until it approximates the figure reached in January, although on account of the steadily decreasing cost, it is probable that the "peak" will be below that figure. The average for the whole year ending December 31, 1928, was 2.64 cents per k.w.h., whereas for the year ending August 31, 1929, the average was 2.58 cents per k.w.h., a decrease in price of about 2 per cent for the year.

Another interesting comparison as to the relative cost of electricity today and 100 years ago, when candles were principally used, shows that it would require about \$450 worth of candles to produce the same amount of illumination as we now get for \$2.20 worth of electricity. Lighting one room with 100-watt incandescent lamp for 300 hours, which is about the average burning time of a lamp a year, at eight cents per k.w.h. would cost \$2.40 today, whereas if it were lighted to the same extent by the original lamps made by Thomas A. Edison, 50 years ago, the cost would be more than \$20 at the present rates for electricity, on account of the vastly larger amount of electricity consumed by the early lamps. At the rates which were then charged for electric service, the cost would have been very much larger.

It is stated that in 1790, at a reception given in honor of George Washington, 2,000 candles were burned to illuminate the hall at a cost of about \$10 an hour. Today, with electricity the cost would not be more than two cents per hour, to give the same degree of illumination.



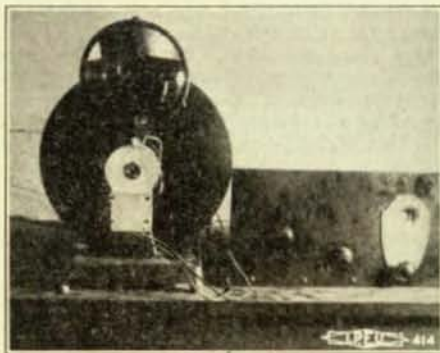
RADIO



WHERE ARE WE IN TELEVISION?

By AUSTIN C. LESCARBOURA, Member A. I. E. E. Member I. R. E.

BUT for the smoke screen that envelopes its progress, the electrical fraternity might have some opportunity of appraising the present status of radio television or, as it is coming to be called, radiovision. However, there are conflicting interests involved in the development of radiovision, so that the true state of affairs is being highly colored one moment, and greatly besmirched the next.



JENKINS RADIOVISOR, SHOWING THE WAVE RECEIVER ON THE RIGHT, AND ATTACHED TO THE FRONT OF THE RADIOVISOR, THE AUTOMATIC SYNCHRONIZER.

In appraising the present status of radiovision, we are obliged to agree more or less on what constitutes good results, or, better still, what constitutes real entertainment. On the basis of pictures alone, it is

evident that many television workers have arrived at a fairly good presentation of animated pictures flashed through the air. From the standpoint of entertainment, however, television can hardly be said to have arrived. In fact, it is the difference in yardsticks used that gives rise to the wide discrepancy in opinion regarding the present status of radiovision.

On the basis of a practical demonstration, radiovision has covered a great deal of ground during the past six months. Today, we have a number of stations, certainly a dozen at least throughout the United States, broadcasting radiovision programs more or less on regular schedule. The stations are duly listed in radio magazines

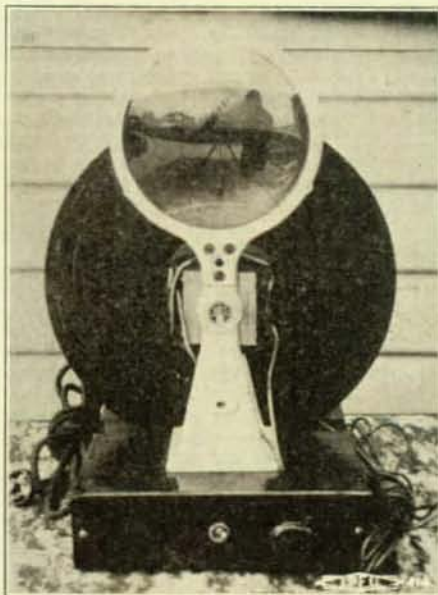
sired, permitting greater action, and therefore a better opportunity to tell the story in suitable pantomime, the silhouette, rather than the half tone form of presentation is resorted to. The silhouette is, of course, simply a black-and-white picture, rather than one representing all the delicate shades and intermediate values between black and white. The silhouette form is capable of excellent action, and, due to the fact that full-length figures as well as a fairly comprehensive background may be used, the entertainment value is considerably enhanced.

Keeping in Electrical Step

Until recently, the greatest drawback of radiovision, so far as a practical demonstration is concerned, has been synchronization, or keeping the receiver and transmitter in perfect electrical step. For the most part, radiovision transmitting stations have contented themselves in having a common A. C. power system for the receivers and the radiovision transmitter. By means of synchronous motors, at both transmitting and receiving ends, it has been possible to keep the scanning mechanism in perfect step. However, just as soon as the transmitting station has endeavored to appeal to persons outside the common power system zone, there have been serious complications by way of synchronization.

Recently the synchronization problem has been satisfactorily solved. The engineers of the Jenkins Television Corporation, for instance, have developed an ingenious synchronizing device which operates on the transmitted signal itself, rather than de-

(Continued on page 52)

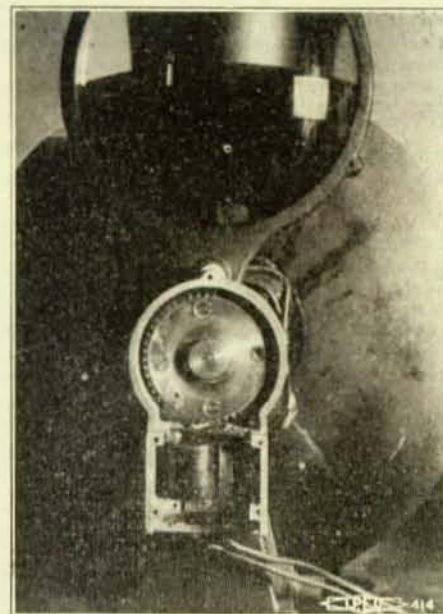


THIS SHOWS SCANNING DISC, MAGNIFYING LENS, AND THE EDDY-CURRENT MOTOR THAT DRIVES THE DISC.

and in some radio sections of newspapers, so that their programs are brought to the attention of anyone who cares to tune them in. The programs comprise for the most part simple subjects, which are really tests of the radiovision technique, at both the transmitting and receiving ends, rather than any genuine attempt at home entertainment. However, from a purely experimental point of view the present results are highly promising. It is possible for some of the better radiovision transmitting stations to handle an excellent close-up of the human face, with such splendid detail that the person may be instantly recognized. Such details as teeth, hair, eyes, eyebrows, and other small features may be clearly flashed over the air, and reproduced by the home radiovisor. It is also possible to present two persons, in the form of two heads placed close together, likewise with good detail. If full-length figures are de-



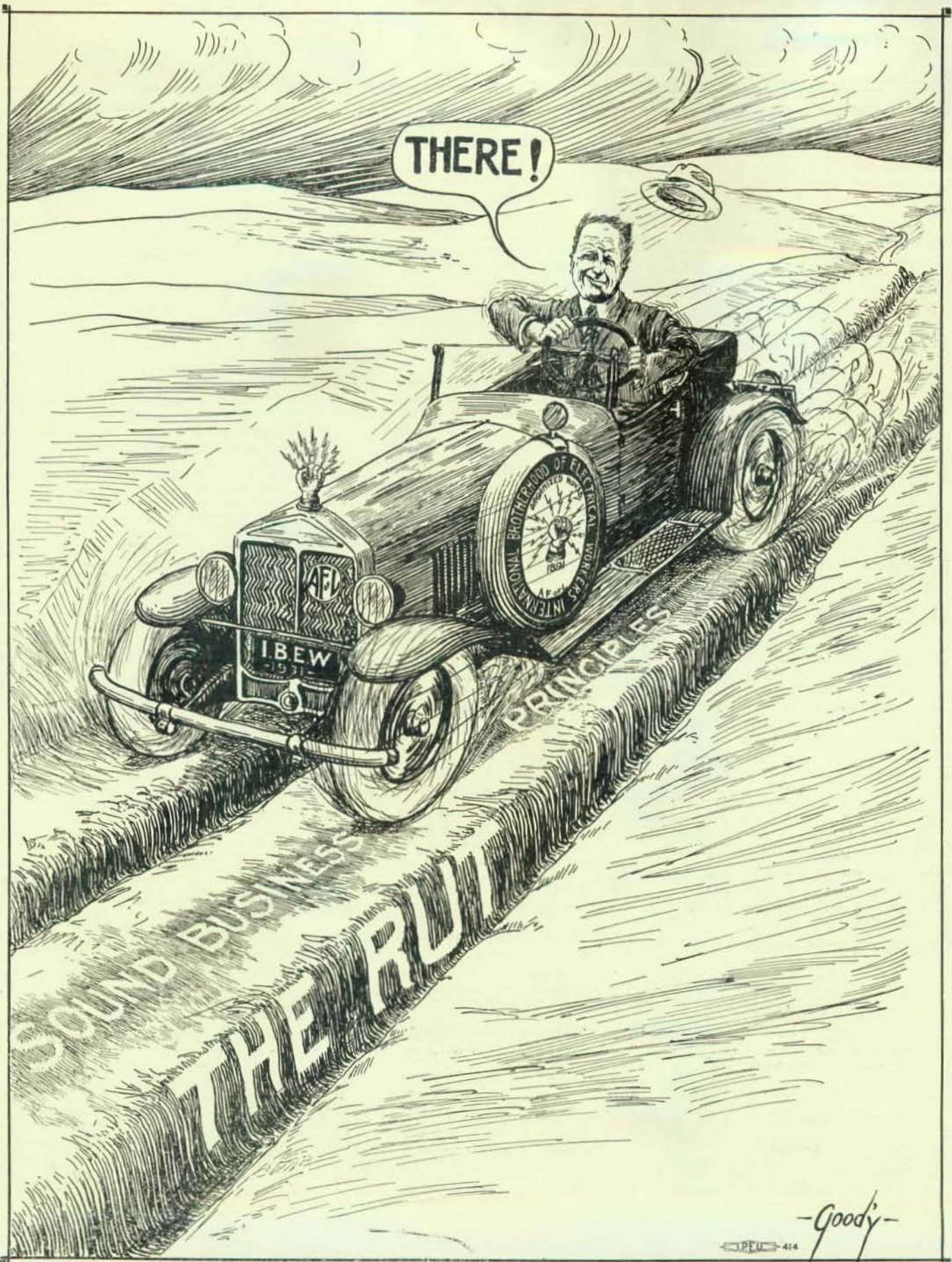
COMPLETE HOME RADIOVISION EQUIPMENT



DETAIL OF THE JENKINS AUTOMATIC SYNCHRONIZER FOR TELEVISION SIGNALS.

LIFTING THE OLD MACHINE OUT OF THE RUT

Drawn especially for Electrical Workers Journal by Harrie S. Goodwin



ON EVERY JOB

There's a Laugh & Two

On Every Job

This page I love
To thumb and finger,
And on its lines
Let my thoughts linger.

For here we meet
In print—and greet
Each other with a smile.

This is our common stamping grounds,
And here goodfellowship abounds;
Come in, old timer—meet the boys,
Their stuff I'm sure you will enjoy.

From north and south
And east and west,
We bring you puns
And rhymes and jests.

We aim to please,
But we razz and tease,
Woe unto the man
Who can't stand these.

Here you never get sad,
Never get blue,
For you're guaranteed
A laugh or two.

If you can't come in
And bring a grin,
Then you're better out
Than you are in.

For here we chase
Away the blues
As now and then
We all ought to.

"BILL,"
L. U. No. 212.

"I never wrote a poem in my life until after I was seriously injured on a job in Baltimore with broken bones, August, 1929," says Walter H. Hendrick, Local Union No. 7. "Since then I have lost many months. I have since developed this hitherto unknown poetic talent during convalescence and study."

I've been told that I was crazy
To fall and crack my head.
But I assure you I was not lazy,
When they picked me up for dead.

In spite of all the time I lost,
It was not in vain;
I feel well paid for all it cost,
For my loss is gain.

Work here goes from bad to worse,
So in idleness I strive
To write this miniature verse
To keep our laugh page alive.

(And much obliged, Walt, for another mid-get poem.)

Lament

My bag is getting dusty.
In the cellar on a shelf;
The tools in it are rusty,
And my pockets lack the pelf.

WALTER H. HENDRICK,
Local No. 7.

A Fool Speaks to Royalty

If I give my contribution
To this column, then I rest.
Good writers like "Mac." and "Pope"
Think that I have gone west.

This page is far too valuable,
That I should fill its space
When masters like Masterson
And Hendrick fill my place.

And "Skorgy", too, sends in his bit,
With a touch of a master's flame;
Those names to us are as famous
As some in the Hall of Fame.

So, come on, send in your poems,
Your kind is quite the rage;
If you send in enough to fill this sheet,
You can crowd me off this page.

But I can't help but feel as though
In the past I've done my part;
But I'm an understudy to stars like you—
All present, now. Let the real show start!

"DUKE."
(Your modesty is becoming, Duke, but nobody is going to crowd you out as long as you want to stay in. Your public demands you!)

Another entry in our miniature poems contest—keep them coming, boys!

Epitaph

There lies beneath this sturdy oak
An electrician who
Touched a live wire without thought
And never did come to.

JOE YAWICE,
L. U. No. 9.

An Ode to "Power-House" Tom

There's a walking, wandering, wireman,
Who's been all around the "sticks".
You never can locate him,
But his home is 86.

You'll meet him down in Baltimore,
Or in Chicago's loop;
You'll hear of him in Texas,
Or he's slipped out on a sloop.

I saw him last in Boston;
He was going to Birmingham,
And I know I'll meet him in the west,
For he'll be at Boulder Dam.

As a wireman, he's a genius;
I've never seen his like;
And at fixtures, I'll assure you,
He's the best along the pike.

He's like Lindbergh, as a lineman;
He's right at home up in the air;
But if you just mention power,
That's O'Reilly! he's right there!

You know of whom I'm speaking,
You old-timers at the game,
But I wrote this for the younger bloods,
Who haven't heard of O'Reilly's fame.

CARLETON E. MEADE,
The Bard of Local No. 86.

Masterson, with his usual courtesy, sends us some kind words and good wishes, which we appreciate very much. And perhaps it may be in order for us to extend our heartiest greetings to contributors to this page, both past and present, and hope we may hear from each one of them during 1931.

New Year's Wishes

Dear Editor, here are a few items About you and the JOURNAL we own; They look just like the real gems, So we thought to jot them down. Say, your editorials are catching, The members all will agree; Just keep your quill a-scratching Out more lines politically. We know you got lots of business, So we won't be taking your time; We have something ourselves to do To find a few poles to climb.

You get pages from the loyal sages,
For the good of the union cause;
Lyrics and stray gems from poets
Chanting our locals and laws;
And piles of praises from writers,
Who have long ago left school;
With obits, billets and letters
Concerning some new kind of tool.
Along with bundles of notices,
Mixed with ink-spattered trash;
But not a great many paying ads
From fellows who have the cash.

You are always up to the minute,
With everything that is new;
So now we want you to put in it
Our few good words for you.
Right here we send you our best,
In the only way that we know;
You can print one of the finest
Best wishes that's not passe, so,
We know good jokes are needed,
Any kind of a comical thing;
They'd take a minute to read it
A smile on the faces to bring.

JOHN F. MASTERSON,
Local Union No. 39.

Here's a story hot off the job, and "if it didn't make me sore, who else should be offended?" says the genial Irishman who tells it, Clair Killen, of L. U. No. 83.

A New Religion

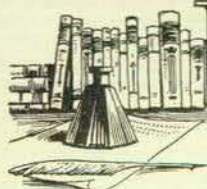
A hill-billie wireman from the Bible belt, thinking he could get an oar in with the foreman on the job, said to him:
"All the Jews should be run out of the country."

Foreman: "Well, I can't agree with you, Lem, my kids are Irish-Jew-American. Their mother is Jewish."

Lem (very flustered): "Well, I mean the Catholic Jews; your wife is a Protestant Jew, ain't she—they are all right!"

"Waiter, it's been half an hour since I ordered that turtle soup."

"Sorry, sir, but you know how turtles are."



CORRESPONDENCE



L. U. NO. 1, ST. LOUIS, MO.

Editor:

The first edition of our progressive newspaper has just been issued. The article on the Bagnell Dam proposition should be of extreme interest to those electrical workers contemplating work at the dam, in that the news item gives various reasons why our men should not go to Bagnell until union matters have been straightened out.

I believe this newspaper is going to be a success. It is published weekly and will keep all who are interested in the union movement posted on building conditions in St. Louis and the vicinity.

Work in the electrical line here at present is scarce. We have about 218 members on the loafing list. In order to give every member a chance to earn a living, the electrical workers in St. Louis have adopted a six hour day. It is hoped that this measure will alleviate hardships during this strenuous period. The depression we are going through at the present time is not a matter of theatre tickets and automobiles, but the necessities of life. But soon we will pass out of this depression as we have come through all the preceding ones, with the members of the union organization more closely knitted together because we have all stuck together through prosperous times and through hard times.

ROBERT B. MILLER.

L. U. NO. 7, SPRINGFIELD, MASS.

Editor:

Well, we are in the last days of the old year and by the time my letter is in press we will be in the new era of 1931, and we all hope and pray the New Year will bring us a new prosperity and plenty of building, for we surely need plenty of work. The year past was a hard one for a good many of the Brothers and it will take a couple of good months' work to bring them back.

But we will all start making good resolutions for good working conditions and we hope we will get our wish for it seems tough for men willing to do hard work and no work in sight.

We surely are getting wonderful co-operation from the United Electric Light Company, of Springfield. They have sent each member, through the mail, a folder telling us all the changes to take place during the coming year and it surely will benefit us in many ways. One of the changes is that after the first of the year, all building of any means will have 110-220, entrance which means larger conduit and more work and they are trying to have the old factories change over to the new system, and the light company is willing to pay half of the expense, and if they succeed it will make it nice for the Brothers who are out of work, for every little change over will mean extra work if they will turn it over to a local contractor.

The electric range companies are having a campaign on now for selling electric ranges and the electric light company is paying for the installation of the ranges, which average around \$55 apiece, which is paid to the contractor for installing the range. So far we have been lucky in having

READ

Union entente with power companies in British Columbia, by L. U. No. 230.

Power developments in Maine, involving a floating power house, by L. U. No. 567.

St. Louis' new progressive weekly, by L. U. No. 1.

Springfield's city power plant, by L. U. No. 7 and L. U. No. 193.

How one city faces unemployment, by L. U. No. 28.

About convention postponement, by L. U. No. 794; by L. U. 1086.

Residential wiring, by L. U. No. 1141.

And the other brilliant epistles that start the New Year off with a bang.

the local men installing the ranges. They also have a house-wiring campaign for the house owner who is not able to pay cash down. The electric company has given them permission to pay the bill monthly and we have been lucky by the help of a committee and our business manager to have most of this work turned over to one of our contractors.

And last, but not least, we are going to hold a smoker the 29th day of December, in our meeting rooms, and we have invited all of our contractors to be with us on this night, for the electric light company has been kind enough to send over two of its engineers to talk about the new rules and regulations and also notified us it would furnish all the cigars for that night. And if you can ask any more co-operation from an electric light company I surely would like to hear of it, and I know all the members of Local No. 7 surely appreciate all the light company is doing for us, at this time, with so many members idle.

E. MULLARKEY.

L. U. NO. 8, TOLEDO, OHIO

Editor:

When this letter reaches you we will have entered into a New Year. The old year has held unpleasant experiences for many of us, but we can profit by these experiences in the better times approaching. We are certain at least that it will be a bigger and better year for the I. B. E. W. now that our new constitution is functioning to its full extent.

Conditions here remain unchanged for the past two months and although a good share of the Brothers are unemployed at this time, we are not in such bad shape regarding the year as a whole. There is always a slump in building at this time of the year, and a recent report shows that there are only a few more Brothers unemployed now, than there were at the same period two years ago.

Last winter was exceptional on account of a large job out of town which employed all members. Work on the new Federal Building has recently begun and there are other good prospects also.

I notice that unemployment in our ranks has caused one improvement, at least, and that is the increased attendance at meetings. We have been having some very good meetings lately, with plenty of interesting discussions. To those who have been absent, don't forget to come down once in a while. We have set aside a period of time each meeting night for reading and discussing the new constitution. Brother J. Distell reads a section of the constitution at each meeting and immediately thereafter the parts read are fully discussed and uncertain parts explained, so as to be clear to everyone.

The Central Labor Union here, recently passed a resolution in favor of the five-day week for all trades, as a remedy for present conditions. We have endorsed the resolution and sent it in to the A. F. of L. at Washington. Some cities have derived the benefits of the five-day week for some time, but it is not in universal use here as yet. We have been looking forward to it for some time, and the present conditions will no doubt hasten its adoption.

Reading an article in the Progressive Press, St. Louis labor paper, I learned that the State of Missouri has been using convict labor on construction of state buildings. The convicts were taken from the penitentiary at Jefferson City, to St. Louis, where the new buildings are being erected, and there worked under guards and lived in a guarded camp. In the face of this many good unionists in St. Louis are without work. This is a lamentable condition in this day and age, and I heartily agree with the action taken by the St. Louis Building Trades Council in sending committees to both the mayor and the governor, protesting this condition.

In discussing donations to the Community Chest here the other night, Brother Art Lang said that he was opposed to giving a day's pay to the chest as he could not get any aid from this source if he needed it, because of living out of the city limits. Another Brother jokingly remarked that Brother Lang earned his wages in town but spent them out of town. Brother Lang replied to this that he noticed that none of the Brothers hesitated to go out of town when they heard that he had a "full crock".

Well, good luck to all for 1931.

HARRY B. VAN FLEET.

L. U. NO. 28, BALTIMORE, MD.

Editor:

This writing finds us in the midst of the holidays and the holiday spirit is in the air everywhere and sets us to thinking. We cannot help but wonder what a delightful place this world of ours would be to live in should this spirit prevail throughout the year as it does now. This season finds everyone willing to lend a helpful hand to those less fortunate. Indeed we find this much more so this year than in many years previous.

We find that the present serious unemployment situation has aroused the interest

of the people in general. Here we had the community fund go over strong. We had the unusual experience of having the police commissioner waive the Sunday blue laws on Sunday so that the movies could donate the proceeds of this day towards the unemployment relief. We find the unemployed selling apples as a means of some relief and the passerby usually helps their cause along. In fact the people in general and the authorities in particular are now cognizant of the fact that we have a serious condition, in fact, an alarming situation on our hands.

This condition greatly reflects the situation now prevailing among the members of Local No. 28. The local found it necessary to issue cards to the unemployed. These cards were honored by the independent grocers for \$5 worth of edibles. The contractors donated turkeys to the unemployed. Those working were urged to donate towards a fund to help pay the dues of those unable to do so. So you see, even Local No. 28 joined in that general helpful spirit now seen everywhere in effect towards the less fortunate.

The cold wintry weather is on us and work is still conspicuous by its absence. We have a feeling that there'll be no work till late in the spring which will find a majority of us now out still out when the birds begin to sing. This means that a good number of us will have been out from six to eight months. Quite a stretch to be out of work.

A good number of the boys were caught in a bank crash and as a result suffered greatly for lack of funds. Seems as though fate wished to cause those unemployed to suffer in full measure. Seems as though troubles never come singly. Our news in this letter strikes a dismal note and reflects conditions found at present among us.

In a lighter vein we can say that our schools conducted by the local are going full blast and are well attended. One of these days will find a good number of real cable splicers, welders and burners, radio men and whatnots, turned out. Yes, we're taking our education seriously.

We find in Brother Broach's comments sentiments expressed that echo quite a number of ideas we've had in mind for a number of years. One of these refers to losing out on residential wiring, and incidentally brings to mind the fact that we lost out on marine wiring. Only one contractor did this work exclusively and he labored under tremendous odds and against overwhelming competition. Possibly we'll all come around to see things in their real light and make real efforts to regain some of our lost earning opportunities and work that is fast slipping from our grasp. Broach says that we've failed to meet conditions and that is exactly what we've failed to do. It is up to us to create as much earning opportunity as possible to compensate for work being replaced by the latest tools and machinery and improved methods and ideas.

Brother "Reds" Winterstein desires information as to the whereabouts of Joe Flynn, of Local No. 3. "Reds" says he has some interesting information for Joe.

R. S. ROSEMAN.

L. U. NO. 53, KANSAS CITY, MO.

Editor:

Really have some good news for this month, not in the line of work, but about politics. On November 4, the common people of Kansas rose up on their hind legs and struck a fatal blow to the arch enemy of the laboring people, Henry J. Allen, who was a candidate for United States Senator. Henry Allen's record is well known to the

laboring class of Kansas. In the short time he was in the Senate he represented the big business interests of the east and, as governor of Kansas, he was the father of the industrial court law, which took away the only weapon of the laboring class, the right to strike.

Now President Hoover wants Mr. Allen to come to Washington and be his political advisor and mouthpiece. Some advisor and mouthpiece he will be. We better retire Hoover and Allen two years from now or it will be "Hoover the hill to the poorhouse" for us.

The Hon. George McGill, Democrat, of Wichita, was the successful candidate against Allen, and while he is not known as well as Allen, we already feel we have a friend in him and we will have some real representation for the next two years.

Work is about normal here at present, but expect things to pick up a little in the spring on the Kansas side.

New Service



HARRY BLYTHE
Using his new hickey.

This machine is mounted on a board and laid on the floor. It will bend three different size ells, and offsets of any design. One small radius two and one-half inches in diameter on one-half inch conduit and two large radius three and one-half inches in diameter for one-half and three-quarter inch conduit with no detachable parts, merely raising or lowering the side arm. The pipe is laid on the rollers and the front latch turned up, bear down on the handle and you have a full 90 degree ell, as it has a stop at this point. Then the handle is pushed back to the original position, the latch let down and the pipe slips out the side, this bends true bends always the same from a given mark. Easy to bend and as short as the book allows. It is light and can be carried around with one hand and used in any room, floor or deck. No mounting of any kind as it bends up like a hickey. I have used one of these machines on the job I am now on, the new city hall, Denver, Colo., and it has bent over 6,000 pounds on this one job alone.

Brother S. W. Chase has traded his ice tongs for a pair of pliers and is back with the Municipal Light. Brother Tom Quirk is also back with the Municipal, after spending the summer building Tom Thumb golf courses.

Brothers Chris Smothers, H. L. Clark and Chuck McTamney are still hanging around the edges waiting for something to open up.

Brother Jack Schlee took a short trip to Detroit to let his mother see her grandson, and Brother Bill Epperson has been pinch hitting for Jack on the service truck.

Brother Ernie Haigh was in the hospital for an operation but is out and around again now.

Brother E. V. Fisher and Brother Walter Holland had a two-round bout two weeks ago and the referee, Brother Carville, awarded Brother Fisher the decision but Brother Holland got in the last blow in the form of a pink slip. Brother Fisher is now "Somewhere in Old Wyoming."

Brother John Wade still has his two-gaited team, Brothers Walker and Ballard, working for him, also the old trapper, Brother J. Murphy, and Brother Mooney.

The Brothers in Independence, Mo., with the assistance of Brother Cronin, finally succeeded in getting the dollar-an-hour scale, which has prevailed on the Kansas side for some time. The Kansas City Power and Light's unorganized bunch are still getting their \$6.60 per and still they can not see the light, but I guess it is because the power is in front of it.

Well, I guess I better sign off and hit the hay, so I can get an early start on the chicken and trimming tomorrow (Thanksgiving). Wishing all the Brothers pleasant holidays.
JOE CLOUGHLEY.

L. U. NO. 77, SEATTLE, WASH.

Editor:

Nothing of great interest, just plugging away at what we have, trying to get more, and still working at our organization program. While it may not all be done in a day we fully expect to have every man working at our trade in our vicinity a member of the Brotherhood.

Of course we feel the effects of the business depression, and while each of us has a sure cure, it is not preventing us from trying to put some of the minor adjustments that may help to a small degree to relieve the situation.

Local Unions Nos. 46 and 77, acting jointly have asked the central labor council to concur in two resolutions, one, that the city council adopt the five-day week for all city employees. Most of the mechanics employed by the city have had this in effect for some time, but it is now hoped to extend this to the other 5,000 employees of the city. This would be another step toward a universal five-day week.

The other resolution asks that the city council lower the retirement age for city workers from 62 years to 60 years. This perhaps does not mean much but it helps a little to a more even distribution of the work.

FRANK TUSTIN.

L. U. NO. 102, PATERSON, N. J.

Editor:

The highlight of our last meeting was a visit from Ed. F. Kloter, vice president, third district. Brother Kloter gave quite a talk on the necessity of having an assistant business manager in our local. He pointed out that one man could not cover the territory efficiently. The result was that Chris Proll is our new assistant business manager. Lots of luck, Chris!

As far as work is concerned, Local No. 102 is about as hard hit as the surrounding lo-

cals, and some of the boys are about one step ahead of the sheriff, with the result that a resolution was passed which reads:

"Whereas the payment of dues becomes a real hardship for the members of L. U. No. 102 who are victims of unemployment, and

"Whereas we are organized to aid each other; be it

"Resolved, That the following plan be adopted to aid those members who lack the opportunity to work steadily:

"If any member earns less than 10 times the amount of his dues in any quarter, he shall personally pay only one-tenth of what he earns; the balance shall be paid out of the sick and relief fund.

"General assessments are to be classed as dues.

"To obtain this relief, members must submit a written application (furnished by the local) to the executive board, on the first Tuesday on or after March 15, June 15, September 15 or December 15.

"To meet the demands on the sick and relief fund, \$1,000 shall be transferred from the general fund to the sick and relief fund.

"Furthermore, each member shall pay 25 cents per month additional into the sick and relief fund. This resolution is to take effect January 1, 1931." THOMAS COHEN.

L. U. NO. 163, WILKES-BARRE, PA.

Editor:

Well, boys, if you don't get into the meetings and report how you are living through the depression you might wake up and find out that it will come right out to meet you in the morning. Some of the boys are having a tough time getting along while some of you Brothers wax fat on a steady job, while the rest hold the fort to make the conditions that keep you in the fat of the land. Now just place yourself in the other fellow's position, going along day by day, with the hope that things will break and they get a day or so to pay their dues and keep in good standing so that when they pass out of the picture the ones who are left behind will have enough to carry on. Some of you don't realize that the other fellow is just as competent to hold your job as you are and has the pride of a union man to hang onto a thread and fight for a condition that holds you in your job and keeps up the standards that we all hope to improve as we go along through our short space of time we are active in this work.

Just sit back and look as we go down the line the last 10 years; look over the faces in the game; place yourself with some of the members who worked for your interest for years and all they have is the satisfaction of saying I helped make those conditions that made our town a better place to work at the wire-jerking business.

Well, we are closing out and going into a new year. What conditions do you expect if you don't get around and help to make them better? Do you want to go forward or backward? You just go along day by day, letting the other fellow carry the load. Well, there are a few of you who claim to be the producer in this racket of ours but all you do to help along is place the blame on the local, pan everybody when they cross your system of doing things, but never help the other fellow. This, some day, you will regret, for we can only go so far, then we slow up. New blood comes along, pushes you to one side, then you turn to the fellow you neglected when you were "it" and expect him to help push when he has used all of his juice holding the job and conditions year after year.

We are starting out on a campaign for bigger and better things. Pan us all you want to; we are going out and get things, try to put our local in the front of the labor or-

ganizations in this valley and if you don't like the way we start with the plan we have underway now, get around and voice your sentiments. We are here for the betterment of this local, spending many of our hours working out the difficulties that come across our paths, as we jerk the wires. We have some of the big shots now. What I mean is shop foremen, who are going into a class that they order to be shot. (Forty-year age limit is what I mean.) Don't be so cocky, for in a year or two you may walk up to one of the new jerkers, a helper that turned foreman, and it happens that he is the boss now; he knows your system of doing things. What will he say? It won't be the story that was drilled into you, for he was educated by you, that the gang over at the local is all wet; when it comes time to get your cakes and coffee for you, he will say that is the way they did things when you were foreman. So just sit back, sum up if you were pounding the bricks, make the picture of yourself, and then start right out to make the other fellow just as happy as you are. Help him get the same smile as you have on Saturdays. So get around, talk things over with the boys, let them know you have the same spirit you had the day you took the oath, and we will all benefit, so will the rest of our Brothers, not only here but everywhere. Make Local No. 163 the example of the I. B. E. W., to push the depression over the high walls that now surround some of our needy and worthy Brothers.

Well, boys, the blinkers are starting to get bleary, so I'll sign off by saying the depression doesn't phase Andy Fisher any. He went and got himself a little Andy. Congratulations, Andy; only don't make a wire jerker out of him. Get him some kind of a racket, then you can put away the old tool bag and live on the farm contented.

GEP.

L. U. NO. 193, SPRINGFIELD, ILL.

Editor:

The first letter of the new year should, I presume, contain new business proposals and a review of the past year. Either of these may be interesting, but I wish to give out at this writing just a few pointers and reasons that had much to do with bringing about an organized job, as I wish to make a few suggestions about the whole, as well as present a few figures to show just about what it means to a small local and city in which they are blessed by its operation.

Some time in the year of 1915, it was proposed by the commissioner of public property that the city should go into the business of commercial lighting, as the city at that time was lighting the streets, employing about a half dozen linemen. In order to bring this about it was necessary to get enough voters to sign a petition to get the matter of purchasing machinery for that purpose on the ballot. To gain that point we got out to all local unions in the city, securing sufficient signers, helping out other interested citizens. This being gained, it was necessary to go over the ground again to urge them to vote "yes." However, we got the vote, even though the power company worked hard to defeat the city. Then the power company went about securing injunctions, which the city had to fight. At any rate the city went ahead, put in the machinery. For a while we could only take on those who had the mind to advance sufficient to cover the cost of running service and meter. In 1916 we had 296 consumers. The gross revenue was \$10,972.81. Today we have nearly 18,000 meters and the gross revenue last year was \$605,406.58. The total value of the plant last year was \$2,353,249.56, and the profits of the plant last

year amounted to \$254,501.64. The savings due to reduced rates since 1916, to February 28, 1930, amounted to \$5,187,486.00. Besides this large saving in rates the plant has paid all its expenses and earned a surplus during the past 14 years of \$1,590,882.87. This plant is owned by the city. The cost of current runs at \$2.40 for 50 k.w.h., lighting domestic, and in some of the cities in Illinois where these plants are privately owned, 50 k.w.h. costs up to \$4.00. For 1,500 k.w.h., lighting commercial, city plant is \$32.00, compared with private plants which charge \$73.50. When used for power, 4,000 k.w.h. city plant is \$68.00. In some other cities in Illinois private plants charge to \$140.00. Our cooking rate is one and one-half cents per k.w.h.

At the present time, Local Union No. 193 has 21 members and Local Union No. 427 has two members working for the city-owned plant, which has operated under union agreements all the time. No trouble at any time.

The only way to increase the value of the plant and its earnings beyond the rate it has gained is through co-operation with the workers by agreement at regular stated meetings, where many matters of interest concerning both the plant and the workers through organized efforts could be handled. There has been much co-operation and effort on the part of some of the employees and much has been gained in that way but it was not an organized effort by any means. What was done here could be done in many places but I say it takes some effort and an honest man at the head of such department. He must be one of those won't-give-up kind and you must get the union men behind such move if success is desired. If the old rate had been enforced last year the customers would have paid \$776,500.00 more for electric current. The total taxes levied for all city purposes last year were \$798,104.35, so our people saved in rates more than 97 per cent of their city taxes. These figures are a part of the 14th annual report of the city-owned plant. We find it is the best asset Local Union No. 193 has.

The reason for the success of the city plant in getting underway was the near-sightedness of the power company and its action even up to now. You see they believe it best not to let their employees have any say about conditions and wages for which they must work. They do not want to treat with organized workers. Well this attitude of the power company was the main reason that the union men came to the support of the city in building this plant. If the power company had used reason they could have avoided this loss of business and would not have had the city plant in the field to fight, had they been willing to make agreements with the organized workers of Springfield. I say it pays big dividends to the company which is willing to deal with organized workers as well as for the organized workers and still greater gains can be made by co-operation between both.

F. C. HUSE.

L. U. NO. 212, CINCINNATI, OHIO

Editor:

Brothers, here is an article that in my opinion would make a splendid New Year's resolution for every member of the Brotherhood.

From time to time almost everyone of us has worked on jobs where no other craft of the building trades was involved but the electrical worker, therefore no support but your own.

Such jobs as industrial plants of one kind and another, stores, apartment building, and

private homes, where you have been sent by your employer to install a small or probably fair-sized job.

Here is an important fact to remember relative to work of this kind, once our men get in on jobs of this kind they should make every effort they possibly can to get more work, for here is an opportunity that should not be overlooked.

Did it ever occur to you while working on a job of this kind to look over the electric work already in operation, to see if any repairs were needed, or by making a helpful suggestion to whoever has charge of the work, relative to an addition, or a change of some kind. That it will mean more work for you? Then prove to them how they can benefit by your suggestion if carried out.

Of course suggestions of this kind should not be made until part of your work is installed; this should depend on the size of your job.

If you install your work in a neat workman-like manner, quite often this in itself is a means of getting additional work, for by doing this you immediately gain the confidence of some person or firm, and naturally this is to your advantage.

No doubt they will in all probability demand your services, whenever they have any additional work to be done in the future, due to the fact that they feel they can rely on you to give them what they want. This means more work for yourself and also more money for your employer.

It also helps to eliminate the unfair contractor from getting this work, for once he gets in on a job of this kind it is very seldom that anything can be done about it, with the result that our members are just losing that much work.

So please remember this: the next job of this kind that you install try out your ability as a salesman, selling your knowledge and skill.

If all of the members of the Brotherhood would practice this I feel sure that we could get some very good results, and in this way help to keep our members more steadily employed.

Don't overlook any bets. Quite often a small job will turn out to be a good-sized one if you will just use your head a little. No doubt many more helpful suggestions could be made, in addition to what I have already written, however, I have just tried to give you a brief outline of its possibilities in regards to this matter to start the ball a-rolling.

Let us start the year 1931 to test out this suggestion and keep a record for each month of the extra work only that you have talked for and see just what can be accomplished.

What do you say, boys? Let's go.

"Nothing ventured, nothing gained."

WILLIAM F. MITTENDORF.

L. U. NO. 213, VANCOUVER, B. C., CANADA

Editor:

Local No. 213's annual dance and supper, which took place November 14, was a real start to a yearly event; was a great success, and thanks to the hard-working committee should be shown by a larger turnout next year. Brother Albers, chairman of the dance committee, who worked hard and canvassed the wholesale houses and contractors, was successful in getting 11 nice electrical prizes donated, and the committee put up three, making a total of 14 prizes worth while. The prizes were drawn for at the dance to the ticket numbers. The prizes and donators are as follows:

Women's—First prize, telechron clock, by Canada General Electric; second prize, heat-

ing pad, by the committee; third prize, curling iron set, by E. B. Horseman Company; fourth prize, electric flatiron, by Hume & Rumble Company; fifth prize, curling iron, by Northern Electric Company; sixth prize, flashlight, by Brettell Distributing Company; seventh prize, flashlight, by Ardiel Electric Company. Men's—First prize, vacuum cleaner, by C. H. E. Williams Company; second prize, electric vibrator, by the committee; third prize, portable lamp, by B. C. Electric Company; fourth prize, electric heater, by B. C. Electric Company; fifth prize, toaster, by Hume & Rumble Company; sixth prize, flashlight, by Gough & Thompson; seventh prize, six 60-watt lamps, by the committee.

This fine lot of prizes will show what you boys missed by not attending.

The supper that also took place was a real banquet and served by union waiters, wearing their trades and labor buttons. And the dance was a solid union dance throughout. Several of us who did not dance enjoyed watching on, and got in on the punch bowl and supper. So next year this anniversary will be bigger and better again.

Our unemployed list is growing every day and Brother Morrison, our business manager, has succeeded in getting a couple of contractors to place a few Brothers, which is some problem and a relief to a few, which looks like we will all have to chip in soon to help those in need. We have a fine gang of boys located back in the mountains at one of our B. C. Electric powerhouses who took up a collection and sent the local a check for \$25 to help the Brothers who have been out of work for some time. They sure showed their Brotherly kindness to a worthy cause.

From time to time we have delegates from other trades pleading with us to support them and buy only union made shoes, clothing, bread and cigars, etc.

Now I think our local should do a little of the same and clean our own house as well. For some time past Brothers of our local of other branches of the trade have had electric ranges, water heaters and furnaces, and radios—various electrical apparatus installed, allowing the companies they purchased them from to use whom they like to install them. I think it a shame for a Brother electrical worker to have work done in his own home by a non-union man. If a Brother wished to purchase an appliance he could have the business manager supply a man to install it and save the overhead cost, a cheaper job well done, and help out a Brother of the unemployed, or demand it to be installed by a union electrical worker of Local No. 213. This also would help to sign up a few of these companies. They sure are glad to get your dollars on a purchase and will do anything these days to satisfy a customer, so, Brothers, for your own protection wake up to these facts.

In closing I wish all a Prosperous New Year.

A. C. MACKAY.

L. U. NO. 226, TOPEKA, KANS.

Editor:

I shall take as my text the statement by that friend of big business, the "American Lumberman", which says: "Now all we need is mass consumption of what we have made by mass production." And never was a truer word spoken by one more qualified to speak it.

But pray tell us how will the masses consume when your patrons and those for whom you are the mouthpiece grab all the profits of their labors?

An advertiser in a local paper offers to pay \$25 per month for a good stenographer.

A little over \$5 per week for a woman who has spent time and money in a business college to perfect herself, and yet they wonder why we are experiencing an era of hard times! They say that the American lumbermen aren't noted for generosity when dealing with those who labor for them, either.

But why don't the masses eat up some of the products of their labors so they can labor some more? And why labor and strive to make money for an employer who doesn't give a whoop for you and yours—you poor worm?

And this was to be full of Christmas spirit, instead of that the fermented spirits are impregnated with vinegar.

We see very few traveling Brothers now in spite of the thousands who must be out of work. They must have decided that it's worse than useless to hunt for a job when there are no jobs to hunt for.

I must say that our International President is one of the hardest workers in the guise of an International Officer. He seems to take all the detail work in connection with agreements and by-laws into his own hands. A real executive who works at the job. This is so unusual that it is noticeable.

He is trying an experiment that while difficult and dangerous is also very important to all sorts of democratic organizations. He is attempting to eliminate the weak link in the chain or, to be more explicit, to take some of the democracy out of a democratic organization, to make a labor union efficient.

The ordinary human loves to hear his own voice, to have his own say and to imprint his own individuality onto every bit of union history. And with a lot of sincere individuals having a lot of different ideas it's hard for any democratic organization to accomplish much. President Broach has sensed this weak link in our makeup and has endeavored to make our authority more central. Now the danger in attempting to do any such thing for a bunch of men is this resentment in having this dangerous plaything snatched from their hands.

The more ignorant a man is the more suspicious he is, and the more suspicious he is the harder he will fight when you try to give him something or to make something of him.

Now I said President Broach's experiment was doubtful and the doubt is caused by an unknown quantity which in this case is the general intelligence of the union electrical worker. That the experiment has been a complete success so far speaks well for the members of the I. B. E. W.

It takes a big man to submerge some of his "rights" for the good of the whole.

Whether individual unions will submit to being standardized in order to make a mighty club to fight a mighty and worthy foe depends on our general intelligence and broadness of thinking.

We must have discipline and we must allow our leaders to lead if we are to gain our prospectives. Let's be big enough to let our officers make something of us.

We must have leaders and we must have followers.

J. R. WOODHULL.

L. U. NO. 230, VICTORIA, B. C.

Editor:

At this time when a widespread depression exists in the business world and retrenchments among companies are the order of the day it is pleasant to note that the British Columbia Power and Light Company have been, and are carrying on a policy of expansion running into millions of dollars. This company have closed shop agreements with Locals 213 and 230, and on Vancouver Island, which is in the jurisdiction of Local

230, their headquarters are in Victoria, and their main supply of electricity is generated at Jordan River and is brought to the city over a 65,000-volt transmission line 43 miles in length.

On March 30, 1930, work was started at the Jordan River power house, for the construction of an additional 18,000-horsepower generating unit, which, outside of the regular staff, gave employment to some 150 men, and on November 24 this unit was successfully "put on the line", and brings up the total amount of current there to 41,750 horsepower. In addition to this, the old Goldstream power house, which was the original source of supply, produces 2,300 horsepower and the Brentwood Steam Plant 5,400 horsepower, making a combined total of 49,450 horsepower.

To take care of the increased load it was found necessary to abandon the old Rock Bay sub station, which had outgrown its usefulness, and a new, modern, up-to-date plant was erected in a suitable location, at an outlay of over \$250,000 and is in successful operation. What particularly interested the members of Local 230, was the fact that to meet this expansion, the company built some duplicate high line, and practically rebuilt the overhead construction of the city, and converted the distribution from a three-wire, 2,300-volt Delta, to a four-wire, 4,150-volt Star system. By this conversion the distributing circuits were increased 70 per cent in capacity. This work was taken in hand in June, 1928, and the last circuit was cut over in July, 1930. A great deal of credit for the high class of the construction and the successful cutover must be given to the two-line foremen, Brothers Tonman and Brown and their gangs of card men who cut 'er in hot, wet or dry. They are all good linemen, but—well, I am a lover of truth and I have a sad tale to unfold.

This winter a fine, large, modern bowling alley was built and the craze for bowling took such a hold of the citizens that the alley is busy all the time. Brothers Tonman, Neville, Quest Mackenzie and Casey formed themselves into a team to compete with teams from other departments of the B. C. Electric, and I will say this for them, that physically, I never saw a finer bunch of men, and as individual, advance press agents they have no equal. With the exception of Brother Casey they are all well over six feet in height and what Brother Casey lacks in stature he makes up in dignity of deportment and besides has an uncanny skill in the art of bowling which frequently makes him high scorer of the alley. Now the Brothers insisted that I sacrifice some of my valuable time and attend a match and see them play. In a weak moment I consented. Did they live up to their advance notices? I'll say they did not! It may have been that my presence as an expert critic unnerved them as, outside of Brother Casey, their performance was blood curdling, and they had the unparalleled audacity to jump me for being a hoodoo. Unless their conduct improves I shall resolutely refuse to attend any more matches.

We are sorry to note that Brother Grant is still on the sick list. We all hope to see him back to work again.

I hear from my old pal, Brother Jack Cameron, occasionally. As a floater, Jack rivals Mrs. Bruce. Since leaving here he has floated through Washington, Oregon, Idaho, Montana, and recently left Bellingham and was back in Seattle when I last heard from him.

Well, if no more letters appear in the WORKER it will be because the bowling team have taken me "for a ride".

SHAPPIE.

ENCORE



DR. GEORGE L. KNAPP,

An editor of "Labor" and author of "The Boys' Book of Annapolis."

Last year Dr. Knapp wrote and published "A Young Volunteer with Old Hickory," an absorbing, historic novel for young and old. This year he presents a fascinating review of the Naval Academy. He has in preparation a similar book on West Point. Dodd Mead is his publisher.

L. U. NO. 245, TOLEDO, OHIO

Editor:

Hello, electrical workers, now that Christmas is over you can all sit down and await the bills. Santa Claus was certainly a busy old gentleman here in Toledo. There were thousands of needy families that went to Santa for Christmas dinner and as far as we can learn there was plenty to go around. Even though there is a noticeable depression in business the shops and department stores were filled to capacity with Christmas shoppers and shoplifters. Every man in Toledo got at least one pair of loud socks, one collegiate necktie and a Christmas saving club taken in some other member of the family's name but charged to him. Oh, this Christmas spirit is a wonderful thing.

We here in Toledo have, like any other city this size, a soup line where a homeless wanderer of the road can hang up his hat and coat for the winter, be assured of three plates of soup a day and a warm place to sleep at night, allowing him all the daylight hours to work the main stem for canned heat and bay rum money. The public benefactor who runs this heated jungle is a contractor not overly friendly to organized labor. His sideline is fight promoting and his hobby is politics. At the recent election he succeeded in getting himself elected to the office of county commissioner. The unemployment situation here is such that hundreds of married men are going to the different charity organizations for help and yet this contractor is luring the common bum here with the soup kitchen as a bait, adding thousands of strangers to our already

large list of unemployed, and furnishing cheap labor to the other contractors. This is a type of man who is worshipped as a benefactor, while in reality he is merely a detriment to the community. But he gained his point—the people elected him to the new office.

The papers are full of items telling the people to spend a dollar and beat hard times by boosting big business but never a line to the hiring one more man and boosting the employment. The Edison Company here is the only company that has even tried to comply with the wishes of our president—to keep as many men as possible working and the result is that no employee of the Toledo Edison was at the doors of Toledo's charities this Christmas. Something to boast of, says I. The employees of the company furnished and distributed several baskets to needy cases that were brought to their attention. And the members of Local No. 245 gave 100 per cent for this cause, besides playing Santa Claus to the family of H. Rardin, our treasurer, who has been home due to an accident for several weeks, but will be back with us soon, we all hope.

My idea of the three greatest men the world has ever known are: First, Lincoln—he freed the slaves; second, Ford—he freed the horses, and third, Hoover—for hasn't he freed the worker? These thousands of workers who have been hungry for weeks, months, and even years, will, if given a job three weeks before the next election, put him back in office because he gave them a job when he needed it, even if they knew that they would lose it the day after election. Such is the way of the world's voters. He and his farm relief! The farmers have been relieved of everything now but the mortgage. And his unemployment relief! He put 10,000 more prohibition agents to work. He opposes paying the soldiers' insurance so as to put that millions of dollars into circulation. He opposes beer that would furnish work for thousands of men. If he was given his say in the matter quartets would be cut down to three men. And I didn't vote for Al Smith, either.

EDWARD E. DUKESHIRE.

L. U. NO. 275, MUSKEGON, MICH.

Editor:

As the year 1930 comes to an end we find that conditions here have not improved. Building is almost at a standstill and most of the boys are idle. However, we see a little sunshine for some of the gang in a new school building which is to be started in the early spring.

This local elected a new staff of officers at the last meeting in December. They are as follows: President, John Lang; vice president, Joe Pascal; recording secretary, Walter Gerst; financial secretary, George Bonjernoor; treasurer, Edward Plunkett. Robert Sweet and Clarence Wagner were elected to the executive board. In order that we may get in step with the new constitution the above will hold office until next June.

On December 12, the wire twisters entertained their families and friends at the Labor Temple. The boys spent the evening shaking feet and partaking of a fine buffet supper. Ed. Plunkett, assisted by Otis Giles, Robert English, Bruce Jacob and E. Newkirk, arranged the party, and we compliment them on its success. Here is a little side light on the party. Jack Wassner stepped up and demanded an ice cream sundae. President Kibbe, at work with the dipper, asked him what kind he wanted, to which Jack replied, "I don't give a d—." "O. K.," says Kibbe, "I'll give you a wire jerkers' special." Here it is: Three large dippers of ice cream, one large piece of

cream cheese, one large dill pickle and a large piece of cake. Did he eat it? Ask Jack; I can't say.

Every day the ice gets thicker and stronger. Before long we can spend our spare time trying to coax the perch from the lake.

I. M. GIBBS.

L. U. 292, MINNEAPOLIS, MINN.

Editor:

It gives me great pleasure to report in this letter that once more Local No. 292 has shown herself to be in the class of the progressive locals of the country by making a very fine start in the organization of a women's auxiliary. The idea has been percolating in the minds of a considerable portion of the membership for some time and came to a head a few meetings ago when a motion was passed on the floor for the appointment of a committee to take the matter in hand and see what could be done about it. At the meeting of November 25, the committee brought in their report in which they stated that they were all ready to go ahead with the organization and recommended that at our next regular meeting, we cut our meeting as short as possible and invite the women to come and then utilize the balance of the evening in assisting in the organization of the women's auxiliary. This program was followed out and the result was the perfecting of a temporary organization of a women's auxiliary of 32 members with a temporary president, temporary secretary and an executive committee of five to act in conjunction with the men's committee on working out the details of a permanent organization.

Mrs. G. W. Alexander was chosen temporary president and Mrs. Elmer Velin, temporary secretary. The executive committee consisted of Mrs. Nessler, Mrs. Schultz, Mrs. Skeldon, Mrs. Jennings and Mrs. Taylor.

The meeting was opened by Brother Jud Caldwell as chairman of the "women's auxiliary committee," after which it was addressed by Mrs. Carlson, past president of the women's auxiliary of the carpenters' who, after speaking on the objects, benefits and workings of that organization and of women's auxiliaries in general, offered to lend her assistance in any way she could in the establishment of this organization.

A decision was made to limit the qualifications for membership to the wives, mothers, sisters and daughters of members of Local No. 292 and that the joint committees assisted by the membership were to carry on an organization campaign between then (December 9) and the next meeting which

will take place on the date of January 6, 1931.

The women have made a good start and the prospects look very bright for the birth of another good, live women's auxiliary of the electrical workers.

At this time, I regret to report there is no improvement in the unemployment situation here, as far as the electrical industry is concerned, and generally speaking, it is steadily growing worse throughout the other industries. Many individuals and families are in a condition of want and privation and there is much suffering throughout the city among those who are out of a job and even some who are working are nearly as bad off due to the miserably low wages paid by some employers, or to part time employment, or to both.

The labor organizations, though they are feeling the strain, are still carrying on and along some lines are doing noble work. Though there is some severe suffering among the ranks of organized labor; on the whole, the union men are in much better case than those who are unorganized.

Some time ago, the city held a registration of the unemployed. It only took place on one day and, of course, there were many who were unable to register at that time, so that it was only a partial registration. It should be needless to say that the main factor in securing this registration was organized labor as they are the only ones who seem to be promoting any effective measures for the relief of unemployment.

Organized labor's committee had prepared a very comprehensive and searching questionnaire card to be used at the registration. Along about this time the mayor had appointed a committee on unemployment, nearly all of whom were either members of the notorious Minneapolis Citizens Alliance or heads of firms that were equally rabid anti-union open-shoppers and not a single union man on the committee. This committee prepared a card and the mayor declared his intention of using this in place of the one prepared by organized labor. In this, however, the mayor was overruled by the city council and I believe both cards were used with freedom of choice of the registrant and the choice was mostly for the organized labor cards.

After the registration, the facts brought out showed plainly why the mayor and his committee wished to suppress our cards; the information on many of the cards revealed some startling conditions of wages and employment in some of the firms under the direction of some of the members of the committee.

The three daily papers of this burg, in their supine loyalty to the open-shop ideals of some of the large business firms, had nothing to say about these facts; however, the Labor Review has been publishing some of the data obtained from the registration cards and according to these reports, one man 42 years old, with a family, worked for \$4 a week, working 25 hours. Some of the street car employees work 54 hours a week for 37 cents an hour. An office worker for the Chicago, Great Western Railway worked 48 hours a week for \$2.23 a day. Other wages and hours ranged from \$16.00 a week of 45 hours for Sears, Roebuck, and one employed by the Williamson Stamp Company at \$12 a week of 50 hours, to 30 cents an hour for a 55-hour week paid by the Flour City Ornamental Iron Company and \$3.60 a day for a 45-hour week paid by the Bros. Steel Products Company. The highest wages mentioned was \$35 a week of 70 hours, paid by the Minneapolis Moline Plow and Implement Company. The longest week being one of 72 hours, worked by an employee of the Hemple Transfer Company, for which he received \$24. Some of these may be exceptional cases, but in the report given by the Labor Review, the wages of factory workers ranged from 30 cents to 45 cents an hour or if by the week from \$12 to 27 a week, and the length of the work-week varied from 45 to 70 hours.

These deplorable conditions are the result of the activities of that labor-hating organization, the Minneapolis Citizens Alliance. Hampered by the opposition of an aggregation of this kind and laboring in the midst of conditions such as these, it is not difficult to visualize the titanic struggle that has been necessary on the part of the building trades unions to secure and maintain their present wage scales, which range from 60 or 65 cents an hour for building laborers to, I believe, \$1.50 an hour for plasterers. Electricians get \$1.12½; nor does it require any great stretch of the imagination to grasp the fact that in a community where such rates of pay prevail, when a period of protracted unemployment takes place, such as we have at present with the big layoffs, factories working with small crews, part time, or closed down entirely, the abject misery, privation and suffering that ensue is something truly appalling.

W. WAPLES.

L. U. NO. 352, LANSING, MICH.

Editor:

Well, another month has rolled around. Deer season is over, the Brothers are all back with no deer and it seems everyone



EMPLOYEES OF CANADIAN COMSTOCK CO., LTD., ON CANADIAN LIFE BUILDING, TORONTO, "OUR BOYS".

brought their guns back, even to the jack rabbit hunters. Still, now and then we hear a post mortem of the trips.

Things are pretty quiet here; not very much extra Christmas work, but the city is lighting the Christmas tree on the main streets.

I read one of Insull's articles in a local paper, where he says that if the government will keep hands off, except in the proper fields, things will be O. K.

I suppose that means let the power trust have Muscle Shoals and some more when they are built. Also not help the laboring class but let capital set wages where they wish and hours to suit themselves.

Just let the capitalists go a few more years and Abe Lincoln's job of freeing the blacks will be a small chore compared to the job of freeing the poor whites.

Some of the factories here are working their small crews about 70 hours a week and turning down from 300 to 500 applications a day, so it seems that if Congress wants to help the poor working "stiff" they would pass a federal law of a 40-hour week, with at least time and one-half for all over that. It surely would be as sensible as the prohibition law and easier enforced.

It is getting good. A friend of mine worked here in a local factory for three years and gave one-tenth of one per cent of his wages to welfare and now after a year without work cannot get even any coal from it, as he bought a place six blocks outside of the city limits.

So long until 1931.

BUMFORD.

L. U. 353, TORONTO, ONT., CAN.

(By wire)

EDITOR:

XMAS CHEER UNEMPLOYMENT CONFERENCES HOCKEY GAMES AND TIE-UP IN MAIL DELAYED TORONTO LETTER TO JOURNAL FOR JANUARY JUST PUT IN A HAPPY NEW YEAR TO ALL OUR PALS IN CANADA AND UNITED STATES AND TELL THEM THAT WHILE WORK IS SCARCE THE BOYS IN TORONTO ARE STICKING RIGHT WITH THE SHIP AND WILL COME OUT ON TOP SOMEHOW SHAW AND I MET PRESIDENT BROACH AND BROTHERS BOYLE SULLIVAN AND PAULSON AT CHICAGO THEY GAVE US A GREAT RECEPTION AND SOME HOT TIPS REGARDS

FRANK J. SELKE

L. U. NO. 370, TWIN FALLS, IDAHO

Editor:

This is the first time that our small local has had the temerity to venture into the realms of literary effort along the lines of correspondence for your columns.

Twin Falls, Idaho, is the center of a large irrigated section of arid land. In the past 26 years there has been converted from desert sand and dust to fertile and prosperous farms several millions of acres.

The large dams at Milner and American Falls, Idaho, have conserved the waters of the Snake River and these have been diverted to the said lands. As the power from the plants situated along these river banks gets extended over more and more farming sections the use of modern apparatus for the home and farm is broadened.

There are so many kids who go to barber colleges to learn electrical A. B. C.'s that the jobs of wiring and installations are gobbled up by the cheapskates in many cases where the legitimate wiring firms get the icy stare.

Now as to this little city of ours, it is gradually growing larger, but not so as you can notice any boom.

We have our unemployed problems. The

Idaho Power Company here laid off several men yesterday, but as they employ undergraduates of the linemen's art, it will not hurt our local. This local, having invited the linemen to join time and again, they cannot say we did not open the gate for them. But they hang back and we have no linemen. Also we have no other crafts except inside wiremen.

The temperatures the past few weeks have ranged around the freezing mark and below to about 10 degrees above zero. This in itself has not been too bad so far. We have had only a little snow.

This local indulges in the practice of holding the business meeting and, afterward serving coffee, cream, sugar, cakes, ice cream, sandwiches, soda pop (for those who don't drink strong beverages).

W. Clay Smith, who is our president, also is our city electrical inspector, and is the same "Smitty" who worked at Long Beach and other coast points. Several of our charter members knew so much more than unionism can avail that after weakening and bellyaching they had the courage left to drop out, which is better than to have them boring from within.

H. H. FREEDHEIM.

L. U. NO. 377, LYNN, MASS.

Editor:

All Will Rogers knows is what he reads in the papers. All I know is what I hear on the radio. Listening in tonight an astrologer predicted dire things for these United States for this year, although it would end happily ever after. There were to be scandals involving Members of Congress. We don't need an astrologer to predict that for any year. The proletariat (page Mr. Stalin) will absorb these scandals; at least they haven't kicked up yet. They like them. The saturation point hasn't been reached yet. If it has the boys on top can't see it, so they will continue to bear down. We're bears for punishment. We're not like the Russians, Spaniards, Nicaraguans, Chinese or, in fact, any other people. I wonder how different, and if there is a limit? Some of our good citizens who have the wherewithal must see the danger as there were more baskets this Christmas than any other. I'd hate to be hungry until the government set the table.

Mr. Average Man doesn't want to be classed as a Communist, Bolshevik, Fascist, or Revolutionist; we must have some new list to cure our troubles, if we wish to avoid the grand climax in the offing. The sure remedy is work for everyone, to remove the fears that hang over everyone who is obliged to work for a living. And whom would you pick to apply a remedy for this problem? Well, it's a question of labor, and who knows the problems of the laborer? Ah, we have an list if they were only given a chance; if they were taken into the inner councils. They are the American Federationists, and the government seems to go out of its way to turn them down.

Well, Brothers, this soap box I'm standing on is made of paper, and like my arguments it might collapse, but before I go I wish to nominate a labor government for 1932. For president, H. H. Broach; vice president, Charles D. Keaveney; secretary of state, G. M. Bugniet; department of labor, Charles L. Reed; department of justice, Charles P. Ford; war department, Mike Boyle; ambassador to Chicago, Walter Kenefick; ambassador to hades, you, Mr. Editor, if you don't get this letter in the January WORKER as I am under pressure to function, if I'm going to be press secretary. If you don't publish it I'll go down cellar and won't come up till doom's day. ED. MCINERNEY.

L. U. NO. 409, WINNIPEG, MAN.

Editor:

Our L. U. No. 409 has a live organizer for the west in the person of Brother Macintosh and it is to be noted with satisfaction that his efforts have been attended with success at two points, viz.: Edmonton and Saskatoon, which, due to his activities are now 100 per cent organized. He is working at present in Vancouver and I hear is making great progress in that quarter.

On November 27, last, the electrical workers of Winnipeg, represented by Local Unions No. 409, No. 435 and No. 1037, held a smoker in the Labor Temple. Although it was a cold night, a fairly good attendance was on hand to enjoy the good things in store, both of an entertaining and a gastronomical nature. Brother Irvine, of L. U. No. 1037, presided and his capability as a chairman was shown in the able manner in which he handled the program. Brother Ingles opened the night's entertainment with a short address and then all were set for a rollicking good time.

A snappy orchestra provided the music, interspersed with solos, humorous songs, character sketches, dialogues, etc. (I detail these, dear Brothers, to show my mind was clear to the last.) The evening went only too swiftly and a hearty vote of thanks is in order to those Brothers who worked so ably to make it a success.

The Christmas season is upon us with its good cheer which helps somewhat to dispel the gloomy thoughts and depression of the past year.

Let us look forward to 1931 to bring us brighter hopes and better times.

Local Union No. 409 heartily joins with me in sending good wishes to the JOURNAL and every success for 1931.

R. J. GANT.

L. U. NO. 427, SPRINGFIELD, ILL.

Editor:

Having had a wonderful Christmas present handed to me by the president of our local at our last meeting, December 23, in the way of a job, as press agent for the year of 1931, will start right off and try to get into print at once.

This job is all new to me but I am what is termed an oldtimer in the electrical game, and I would like to inform all the members of the I. B. E. W. Brotherhood that we should all feel very proud and happy to think that we are members of the largest and strongest union labor organization in the United States and Canada.

This has all come about by the hard-working and painstaking officials, from the president down to the office boy. Each and every one has their duty to perform, and when that is done something can be accomplished, and from all reports they have done something and done it well.

Our president is a very deep thinker, and a fearless man. You have heard of some men who speak twice before they think. Well, Brother Broach thinks twice before he speaks, and when he does speak it has been well spoken.

Local No. 427 is striving to master the new constitution, and all its members are making a study of same, so as to have some idea of what it all means. If we as members would read our MONTHLY WORKER and digest some of the articles that it contains, some of us would not be so cocky, and fault-finding.

We had the pleasure of having Brother Boyle, vice president of the sixth district, with us in September and with him was Brother Ray Cleary, and they sure told us what we had to do and how we should go about in getting it done. Those of you

who have never had the pleasure of meeting Brother Boyle have something in store, as he is one of the sure shots of the I. B. E. W. and has accomplished a great deal for our organization as a whole. He is the quickest thinker that the writer has ever met, and if you do not believe it, just write him a letter and then meet him and start to talk about some subject that you asked about. Brother Ray Cleary and Brother Joseph Lyons, who visited us later are men fitted for the positions they hold, and if the locals pay attention to what any of these men tell them they will not go amiss.

Since October 1 this local has had a full-time business manager in the field and we believe that we have made some progress, but you can not build an empire in a day, so we are plodding along nicely, and hope for larger things to take place in our jurisdiction, which by the way has been extended to a 45-mile radius from Springfield, and we hope to be able to show some results before long.

The business manager has made several trips to the surrounding towns in our district, but as none of these cities have adopted the state law requiring the electrical contractor to take out a license we have taken up this matter with the city officials, and it looks good for next year, as all of the other crafts that require license have these towns sold, and it is up to us to sell our idea; if there are any locals that have or have had this experience we would like to hear from them through the WORKER or a letter direct to this local. What success have the states had that require all persons doing electrical work to pass an examination? Will some one advise us on this matter.

For the past 18 months this local has had plenty of work; the 54 men and seven helpers have been busy all the time, and we have had as many as 30 Brothers from 14 different locals working in our jurisdiction at one time. But work is back to normal again and by February 1 the travelers will be on the road again and perhaps some of the home guards will follow.

The C. I. P. S. Building in this city is a thing of beauty and we are proud to say that all work was done by union men. It is a 15-story building, the largest we have. The Hattfield Electric Company, of Indianapolis, Ind., had the electric work fixtures and Brother John Connors, of Local No. 481, had charge of the job, or pusher as some foremen are called, and he sure is an A No. 1 Brother, and the writer does not think he is a pusher as the name applies, but he is like all A No. 1 men: expects you to do what you get paid for and then some. The "then some" is what gets your pay increased.

There are 245 floodlights of different color and the lighting effect is very beautiful. The Haenig Electric Company installed the thermostatic control system for the heating contractor, and Brother Howard Kuster and crew did the work. The Otis Elevator Company are installing the four-passenger elevators, and a large freight elevator to take the motor cars down and up from the sub basement. This building is up to date in every respect and we sure are proud of it and also the C. I. P. S. Co. for using such good judgment in having it put up in our city.

We have a small local, but it is made up of young men, and all of them are full of the three V's, in other words, full of "pep". Our meetings are well attended; business quietly and promptly executed; no wrangling or long speeches; just plain business sense. The executive board and business manager meet after each meeting and that is where the business is mapped out

for the next meeting. Thanks to the new constitution.

The article in the November WORKER by Brother Knott is food for thought, and we believe that if there is a referendum of all locals on the question of postponing the convention it will be carried. We believe it would be the most logical thing to do at this time. By 1933 all locals will be on their feet again and will gladly send a delegate at that time, but if it is held next year only the larger and more able to finance the delegate will be on hand and you will not have a fair representation of all locals.

If this first shot goes straight you may hear from Local No. 427 again.

AN OLDTIMER.

L. U. NO. 477, SAN BERNARDINO, CALIF.

Editor:

San Bernardino, "Gate City" local and the home of the National Orange Show, sends you all a Happy New Year.

Brothers, the good news for 1931 is the first half of December, 1930, all members were working. This is very encouraging. Through the efforts of R. H. Mack, secretary of the Chamber of Commerce, the citizens of San Bernardino had a very beautiful Christmas street decoration, consisting of lighted streamers and Christmas trees. Christmas carols were broadcasted every evening by the Thew Radio Company of San Bernardino and they sounded very nice. The Thew Radio Company does the broadcasting for the National Orange Show.

Work at the orange show is going on rapidly. William J. Kowin, the decorator in charge and a member of Local No. 235, of Los Angeles, and president of the United Decorators of Los Angeles, knows how to decorate and is putting on a wonderful decoration. The lighting scheme on the overhead is diffusion 172 amperes above ceiling cloth. The large chandeliers in Exchange Building include two of 41 amperes and eight carrying 26 amperes; the chandeliers are the

only direct lighting. The best of the lighting around 1,500 amperes will be diffusion. This is something new and was used on the Chamber of Commerce feature at Los Angeles County Fair at Pomona last fall.

Brother Philipps, of the Building Trades, says organized Labor Day is going to be a big one—Saturday, February 21, 1931.

Am sending a clipping from Orange Belt News and general view of decorations of National Orange Show, 1930.

Hope the Editor has room for this in January WORKER.

P. T. HOFF.

L. U. NO. 492, MONTREAL, QUE., CANADA

Editor:

Conditions in Montreal are about the same as in most other large cities throughout Canada and the United States with lots of unemployed walking the streets and several bread lines in operation.

Overproduction in many lines of industry, the machine age, causing the displacement of the human element, and the heavy war debts of the participants in the World War have all contributed to cause this depression which is not confined to this continent, but is world wide.

About two years ago we heard much talk of the benefits of a high tariff for protection of industries and markets and all pointing to the United States as a model and at that time it looked as though there were a lot of truth in it, but it seems to me that the fact of the United States suffering just now to such a serious extent as it is disproves much of the above theory.

At this time of the year we should take stock of ourselves and see if we are progressing or not and I am happy to report we, in Local No. 492, feel we are moving ahead. Looking back we find that during the year we accomplished much, established a six-day week for men who had worked on a seven-day basis, which meant more jobs for about a dozen men; surely we should take some pride in this fact alone. In the



DECORATIONS BEING COMPLETED FOR THE NATIONAL ORANGE SHOW AT SAN BERNARDINO, CALIF., INCLUDE NOVEL LIGHTING INSTALLED BY L. U. NO. 477

year about to commence we should strive for greater co-operation between members of locals and between locals themselves to help one another to solve our problems. Let 1931 be a year of strengthening our organization. Local No. 492, of Montreal, sends to our International Officers and members of all other locals in the Brotherhood fraternal greetings at this festive season and best wishes for prosperity in the New Year.

H. M. NEVISON.

L. U. NO. 567, PORTLAND, ME.

Editor:

More Maine prosperity!

Probably this does not affect the organized electrical worker in the state to any further extent than that he is aware of the completion of another gigantic project and that considerable capital that was not his was necessary and available to operate on such a profuse scale but here his interest wanes, for there wasn't a job at his regular pay and conditions.

However, some one might be interested to know what is going on way down here in the far stretches and some of the boys who have known Maine might be surprised to find she is so far advanced. On December 6, 1929, at Bucksport, down the coast, ground was broken for the plant of the Maine Seaboard Paper plant and not quite a year later, on Thanksgiving Day, the first machine of the \$7,000,000 plant was set in motion with elaborate ceremony. This mill will employ 275 persons and have a daily output of 300 tons of newsprint and in addition about 1,170 men working part of the year will be needed in preparing pulpwood.

Between 900 and 1,000 men have been steadily employed during construction but on completion about one-half were dismissed, the remaining workers being used for finishing touches, including 200 men on the Silver Lake project.

Through the efforts of Frank P. Silver, general superintendent of the plant, and F. P. Bagley, vice president, the mill has been equipped with modern machinery and Mr. Silver has been so successful in his study of labor-saving devices and incorporating other special devices that all speed records for such work seem destined to be broken. The present record is 1,140 feet per minute held by a machine in a Port Angeles, Wash., plant, while as a competitive figure the new Bucksport machine produced 1,000 feet and was not running to capacity.

But what has all this to do with the electrical worker? Nothing yet. But here's one for the book, and it will be a new one on most of you.

Probably the most unique machine in actual operation in the Seaboard plant is the steamship *Jacona*, which is the source of electric power for the operation of the machines. Converted into a floating powerhouse for the New England Public Service Company, the *Jacona* is a novelty in any man's land—or water—as she stands by, servicing the mills.

The *Jacona* has a capacity of 20,000 kilowatts and will be in constant use until the completion of the big Bingham Dam of the Central Maine Power Company from which future power will be supplied.

This floating power house is equipped with four boilers supplying steam for two turbo generators, each rating 10,000 kilowatts.

All previous cargo and machine spaces are displaced by new equipment. Near the center are four full tanks with a full five days' running capacity of 900 tons of fuel oil. Aft of the oil tanks in the original engine room is one of the 10,000-kilowatt turbo gener-

ators and auxiliaries while the other has been placed in a former cargo space.

Making proper electric connections with the shore was a considerable problem until finally a steel tower was erected on the deck of the *Jacona* and another on the port side in line with the center of the switchboard room. This tower may be transferred to the opposite side if necessary. Two separate three-phase circuits are run from cross arm structures to a dock tower and slack cable left to meet the rise and fall of the tides.

Matters are rather quiet in the local these days, although no actual hard times have set in.

We are enjoying the process of listening to the necessary three readings of our new by-laws preliminary to their adoption, and the new regime which calls for bi-monthly meetings makes it seem somewhat long-drawn.

Facing a somewhat discouraging proposition of heating our large hall, ante rooms and sub-let tenants for the next five months, we have dropped the whole proposition and moved, and at present are meeting in a temporary hall across the street with our officers occupying rather fancy quarters up-town in the State Building.

The annual visitation of the Christmas spirit has considerably reduced my voltage and otherwise flattened me. But tradition must be upheld, requiring the compliments of the season and Local No. 567 wishes to all the fraternity best wishes for what appears to be a dismal New Year.

M. M. MCKENNEY.

L. U. NO. 586, OTTAWA, ONT., CAN.

Editor:

I am sorry that I have been lax in getting my last few letters in print, but things have quieted down around here and the going is rather tough, therefore I have not had much time for communication. However, here goes.

On October 17, 1930, we had with us Brothers L. A. McEwan, system general chairman of Canadian National Railways, and J. J. Duffy, who gave us a talk on the Canadian Railway Local Union transfer agreement. They also explained to us the benefits derived from these men electrically employed, who were about to become members of the I. B. E. W. They also explained the workings of the Regional Council, the fees paid to our local unions and to the council. They gave us a thorough knowledge of all the workings of said men and their executive. Brothers Duffy and McEwan both took the floor and their talk was a pleasure and a great benefit to all in attendance. Therefore I take this opportunity for myself and the other members of L. U. 586 to express our thanks to both these Brothers for their work and help in the matter.

Well, all ye members of the I. B. E. W., it is nigh the day of good cheer and we members of Local Union No. 586 wish you all a joyous Christmas and a prosperous New Year.

LOU. D.

L. U. NO. 595, OAKLAND, CALIF.

Editor:

Time for another edition of the JOURNAL is here again and as I have fallen down on the job somewhat of late I will get busy with a few lines for the next edition.

Working conditions have not improved to any extent since last report.

The Shell job at Pittsburg is still running under unfair conditions for our craft as well as others and a boycott has been placed on their products by some locals of the bay districts.

The Ford Plant at Richmond is very slow in getting ready for the electric work and at present only one or two men are employed there.

Local No. 595 held its yearly dance for the benefit of the Christmas cheer fund in November and quite a sum was collected.

Everybody who attended had a fine time and the committee in charge handled everything in first class style, having about fifty door prizes which were donated by the electrical contractors and wholesale dealers who are on friendly terms with Local No. 595.

Local No. 595 has just lost another of its old-timers in Brother W. F. Cronin, who for a number of years was a tender on one of the county bridges.

We have had enough hard times the last year so let's hope that 1931 will bring a return of some good times again.

E. B. ESHLEMAN.

L. U. NO. 636, TORONTO, ONT., CAN.

Editor:

Brothers, it is some time since I have attempted to write anything to the JOURNAL.

The news I have this time is of a very sad nature. On Tuesday, December 17, at 1:30 p. m., Brother Dennis Joseph Burke was almost instantly killed by coming in contact with 2,200 volts and a grounded transformer case while changing cutouts.

Dinnie came here about seven years ago. He and I were mates for almost two years, when he was transferred to another gang. Since that time he worked about 10 months in Hamilton, coming back here last New Year. About two months ago another shift of men brought Dinnie and me together again and it was my sad experience to be on the other end of the crossarm and see him killed before I could get to him. The trade and the I. B. E. W. have lost one of the best. A wife and two little girls, aged five and six years, have lost a kind and loving husband and father. The esteem in which he was held was shown by his fellow workmen at a well-attended funeral held from his late residence, 155 Rhodes Avenue.

Once again, Brothers, the value of insurance was shown.

This same Brother traveled 45 miles a year ago last Labor Day to take part in the Labor Day parade. That was how good he was.

J. BROWN.

L. U. NO. 665, LANSING, MICH.

Editor:

A Happy New Year is the wish of the members of this local to all.

Christmas being over, we begin to think of spring. This year ended much better than it began for a number of us. Some of us who had not had any work from December 15, 1929, were put to work in the last of October, and that surely helps very much.

The proposal of Brother Knott regarding the convention seems to have real merit, for as has been pointed out, if a commission or delegation can revise and make a new constitution that will be workable, as the present one apparently is, why can they not do more?

Centralization of authority is the thing that makes for greater economy and quicker action, better regulation and smoother running organizations as has been proven by the continued merging of all sorts of business, churches and philanthropical enterprises.

All this could be accomplished by paring the number of delegates, the frequency of conventions or in several ways.

Such a proposition carefully gone over, then voted by a referendum would undoubtedly be adopted.

Vice President Boyle visited us last month, leaving some real helpful information and new ideas.

Both his visit and Brother Davis' visit were helpful to both locals.

Brother Boyle is trying to visit all locals in his district once a year and Brother Davis had not been here for about two years, so both locals in Lansing had a pleasant surprise.

H. J. PAGE.

L. U. NO. 700, GLOBE-MIAMI, ARIZ.

Editor:

Well, it looks like I was a little late in writing my first letter, as I was told that there was no correspondence from the baby local union of the baby state, namely, Globe-Miami Local Union No. 700. I was sorry it did not appear, as were the rest of the members of our local union, because we are all very enthusiastic and proud of our organization so far. But I am going to try again and let the rest of the Brotherhood know that we have a new organization here in the Globe-Miami District.

Our officers are: President, Charles B. Foxx; vice president, R. L. Sattroo; financial secretary, Arthur O'Leary; recording secretary, George Backues; treasurer, O. B. Luckie; and press secretary, E. R. Packer.

Our chief industry here is copper mining. Some of the biggest mining companies of the world are located here, such as the Miami Copper Company, the Inspiration Consolidated Copper Company, and the Old Dominion Copper Company, all mining copper on a large scale. It has been advertised that the Miami-Globe District is the district with the "billion-dollar payroll." Of course this is not true at present. Although we have a big payroll here, the average scale here is very low, and that is what we are going to try to correct with regards to the electrical workers.

We have about the same situation here as they had with the steel industry in the east, and we are going to try to get as good conditions as they have now in the steel industry. But it is going to mean a fight, just as it has been a fight to organize men all over the state. It is largely through the efforts of International Representative F. W. McCabe that the electrical workers in the state of Arizona are as well off as they are. Brother McCabe is a fighter and let no one think he isn't, and if we had several more like him out here we could improve conditions very much.

Our part of the country is in the dumps like the rest of the country but since the

price of copper has taken a turn for the better, things are looking up. But we are by no means well off, so would advise anyone thinking of coming out here looking for work, although we have a fine country out here and welcome visitors, to stay away because there is none at present. We have three local contractors here but as there is no building going on they are not hiring any men.

E. R. PACKER.

L. U. NO. 734, NORFOLK, VA.

Editor:

A well known manufacturer of automobiles announces the policy of advertising prices "delivered," instead of prices "f.o.b." This should be welcomed by the buying public, for many people have balanced the family bank-book against advertised prices only to find that "the nigger in the woodpile" represented by "bumpers, spare tire, delivery charges, etc.," added at times as much as one-third to the price they expected to pay.

A parallel to this display of lack of integrity is the advertising of radio prices with the notation in small type, "less tubes."

The public should demand that manufacturers and dealers "come clean" in their advertising.

Brother O. T. Ayres, past president of Local No. 734, has been elected president of the Cradock, Norfolk County, Chamber of Commerce for 1931.

Realizing that the majority of trial juries are composed of residents of the locality wherein the alleged offense was committed, suggest that prospective jurors be catechized thusly:

Can you read and write?

Are you of normal intelligence?

Are you sufficiently interested in your community to read a daily newspaper?

If the answer to any of these questions is yes, the prospect should then be warned that unless he or she falsely swears that no opinion on the case has been formed, he or she cannot serve on that jury.

SAUVAN.

L. U. NO. 794, CHICAGO, ILL.

Editor:

First to the Editor: We wish to apologize for not having a letter in the WORKER lately. This neglect was due to the illness of the regular press secretary and his wife.

To the Brotherhood: We send New Year greetings, hoping that the unemployed prob-

lem will be solved, and that you will have 365 days of prosperity.

To the Illinois State Conference, I. B. E. W.: Yes, we are in favor of postponing the International convention for two years. This will give the International Officers ample time to put in effect their new policies, and the money saved could be put in the pension fund. An international labor organization or local union cannot be rebuilt over night; it takes time, patience and money.

To the railroad electrical workers in Chicago: We are in favor of one railroad local in Chicago. The consolidation of local unions Nos. 793, 794 and 797 has proven that it is unnecessary to have a local for each railroad. Would the inside men have such locals as No. 3 or No. 134, if they had a local for each electrical contractor? Think it over; attend the next meeting of your local union, discuss this matter and appoint a committee with the authority to act for your local.

To the membership on the New York Central Lines: We are in favor of reducing the number of local unions on the system requiring locals acknowledging additional territory to employ a paid representative to be paid jointly by the local union and system council, one of these representatives to be recognized as a general chairman. The day has passed when you can get competent local committees to perform the thankless task of representing you without compensation. "Believe it or not."

To the membership of Local Union 794: The revised by-laws have been approved as corrected by the International Vice President, but will not be printed and mailed to the membership until permission has been obtained to amend or omit, some of the added sections. The section dealing with the immediately death benefit stood the test, but your beneficiary will not participate in this benefit or any benefit in the Brotherhood, unless you maintain a continuous good standing. Remember, the dues are to be paid quarterly in advance, and the 90-day reinstatement clause should not be used except when absolutely necessary. If you are out of work you should state the fact to the local union executive board before it's too late to protect your standing.

C. A. LATHAM.

L. U. NO. 832, HIGH POINT, N. C.

Editor:

For the first time in the history of the I. B. E. W. to the WORKER comes correspondence from the south's largest furni-

SCHOOL DAZE

By Al. Guy



The stem of his pipe is REED
He sat by the fire to READ
And this is what he READ
Green blackberries are RED.

ture city, a city of more industrial activity than any city of the south, and a tough nut to crack for the A. F. of L.

The boys of Local No. 832 have their shoulders to the wheel and keep things going; we will, despite the fact that it turns hard. There are two journeymen wiremen to every job here and "hard headed" like nobody's business.

But, say, we are getting along. I think that we of the organized labor should show some appreciation of the work these organizers are doing through officers of this organization.

This country doesn't seem to realize that they work from morning until sometimes very late at night, with no one to cheer them except their wives and mothers. They take the knocks and we should show them the appreciation they are really worthy of receiving.

We, of North Carolina, are very close in many respects to our fellow craftsmen of southern Virginia and of United Textile Workers of Local No. 1685, Danville, Va., who are striking against the unfair conditions of Schoolfield mills of that city.

Unless you have worked in or around some of our textile plants you cannot know the conditions here in this "sunny south" where the flowers bloom and the birds sing out in the fields and meadows, but inside of these places there is hell, with nothing singing but the shuttle. Why, may I ask you, Brother craftsmen, should they not demand what rightfully is theirs—what they have given the best of their lives for—a sanitary place to work, a just wage for their consistent effort, clean wholesome food, good clothing, and a good, clean, well-furnished home? In the name of Almighty God, why are these conditions objectionable?

This is what the boys of Local No. 1685, U. T. W., are asking and they are leaving it to the world. I am trusting that you Brother craftsmen will see the responsibility that rests on your shoulders.

If for any reason Local No. 1685 loses her fight, and she stands a good chance to lose, southern labor will have suffered a set-back of many years.

The mill owners throughout this part of the country have gotten troops sent to Danville, Va., in hope of breaking the spirit of those men and women who are fighting for better conditions here in our southland. Cold and hunger will help to break this noble spirit.

High Point central body, on November 23, 1930, sent a motorcade of two trucks (one of them furnished by Local No. 832), over 40 cars and 200 men, women and children to Danville. Over 6,000 pounds of flour, clothing and everything we could get that would bring happiness and encouragement to those workers of Local No. 1685.

Now Local No. 832 surely had her hands in this and will continue to co-operate with the central body from time to time.

They tell me there is another motorcade being formed in which we expect to send more than we have sent and carry more cheer than has been carried before. Now as these workers did not receive enough wage to keep the wolf from the door, even when they worked full time, after about a month their funds and spirits are very low.

And I say to you Brother craftsmen, in the name of Almighty God, we must carry on for these boys; keep them smiling; keep them warm, with a square meal when they need it, and you have but to wait for victory a short while. Let the wolf in and the south has lost a good fight for a very good cause.

After you have read this may you look here and there for something that will be beneficial and bring a smile to those workers, bundle it up and send to them. Right now is the time to do this thing. Don't put it off until tomorrow, for tomorrow may be too late.

We are not making this request idly but for the welfare of organized labor throughout the south. In the name of the I. B. E. W. and the American Federation of Labor and for the sake of humanity, Christianity and the uplifting of our "sunny southland".

Brothers, of this and other crafts, you must know that we have to win, you must come to the realization that you have a hand in this fight and let's don't shirk what is ours. With my cards on the table face up I leave this to your better judgment. Don't delay. "Time and tide wait for no man," and no man can live within himself. Give all and give until you feel it. Those boys of Local No. 1685 are doing their part; let's not turn our backs on them; let's show them we are behind them 100 per cent.

You will please get your donations in at once to Secretary Blackwell, United Textile Workers Local Union No. 1685, Danville, Va.

As an example of the way business is in the south I recall Brother Harry W. Dalby's article, from Local Union No. 48, Portland, Oreg., in which his boat had to tie up every time she blew her mighty trumpet.

For a beginner I think I have overstepped my bounds.

J. FRANK SLAYDON.

L. U. NO. 912, CLEVELAND, OHIO

Editor:

Local No. 912, second largest local under the jurisdiction of System Council No. 7, New York Central Lines, and System Council No. 4, Baltimore & Ohio Railroad, extends New Year greetings to all locals. We also extend an invitation to visit Cleveland, the sixth largest city in the good old U. S. A., to see an up-and-going railroad local in action.

Our executive board is functioning perfectly under our modern constitution and our new by-laws will be ready for the fumigating process this month.

Who said that the members of Local No. 912 were dead on their feet and couldn't organize the "no bills", who borrow your lawn mower and do not help to pay the freight? Brothers, before this goes to press our local is going to start a real organizing campaign. Nothing difficult about it, just everybody put their shoulder to the wheel and we can make this local twice its present size. Full details will be available at our next meeting. Forget "sixty-six" and "race-horse rummy" and let's play that good game called organize. Absolutely the high man wins. J. J. Duffy might consent to be referee.

Our executive board caught International Vice President, Brother McGlogan, in town last month and had a very pleasant and informal meeting with him. Come this way often, Brother McGlogan. We know how to ask questions and appreciate your co-operation.

We hope that Brother George Ledwin, of Local Union 854, is removed from the sick list. How many pheasants did Brother Caruso Schmidt get on his fox hunt? Brother Joe De Paul regretted that he didn't have his horse with him so he could go along. President Curly Berg doesn't ride. However, he will indulge in a foot race at the flip of a coin. J. J. McCullough, the pride of Local Union No. 817, doesn't need publicity.

Just a few words about the union label. Don't buy goods made by prisoners at the

big house. You can get union label shoes and clothing in Cleveland and get better quality for the same money. Be a union man in the true sense of the word. If you want a union made overcoat just ask Brother Duffy; he got one and I have been trying ever since to swap. Al Rossmann went to Pittsburgh.

BILL BLAKE.

L. U. NO. 1037, WINNIPEG, MAN.

Editor:

By the time this appears in print another year will have passed, with all its joys and sorrows. Some of us have prospered; some haven't. In many respects 1930 has been a poor year, but taking the various trades in review the electrical workers have not done so badly. Maybe the magnetic influence of our new president has been the means of elevating us a little above the common run. Maybe the members themselves have all helped. One thing I do know, the three locals located in Winnipeg—L. U. No. 409, Canadian National Railway electricians; L. U. No. 435, inside wiremen, and L. U. No. 1037, linemen and cablemen of the city hydro, Winnipeg Electric and the Manitoba Telephone System—sure had one elevating time on November 23. About 300 members gathered in the Labor Temple and enjoyed one of the finest concerts ever presented before a bunch of hungry and thirsty men. The program, donated by Pellisiers Brewery, Ltd., was of a very high order. A short address by International Vice President Ingles followed the chairman's remarks and the balance of the evening was one continuous round of entertainment until the "wee sma' hours." The night will go down in history as something that was missed by those who were not there.

The sleet storm of November has also passed into history and things are again back to normal. Everybody is working yet—well, I wouldn't say everybody, just mostly—but work is pretty scarce. The Winnipeg electric laid off some men, also the city hydro, and everything will be pretty quiet until spring comes around the corner. Politicians tell us that prosperity is just around the corner but you know what politicians are—not a doggoned one of them will say what corner and that is as definite as any other promise any of them ever made.

Hello, "Duke!" I thought you had hibernated with the bears and am glad to see you have crawled out of your hole again.

IRVINE.

L. U. NO. 1086, TACOMA, WASH.

Editor:

The article by Brother Bosco Knott, of L. U. No. 9, which appeared in the November issue of the JOURNAL, is deserving of a great deal of thought and consideration by all locals.

As Brother Knott says, the constitution is brand new. In addition to this our president is also quite new on the job, and to us it seems a needless expenditure of money to transport an army of delegates to the far corners of the United States, or Canada, to re-elect the present staff of efficient and competent officers, and perhaps make a few slight changes in the constitution. This could be handled very nicely, we feel, by the International Executive Council at their meeting next September, and we will go Brother Knott one better, and recommend that the International Executive Council re-elect the present officers and set the next convention for September, 1935. This would produce a saving of some \$200,000 or more, and should forestall any assessment for at least another year.

We view with alarm the possibility of an assessment being levied against the membership during the present period of depression, in fact, an assessment at any time is very undesirable. It would work a great hardship on the Brothers who are out of work, and would not be very welcome to those who are working, because in the majority of cases, most of the members are working short time and are also faced with the four-day workweek. The finances of the small locals are such that it is impossible for them to care for their unemployed members, even to the extent of paying for their cards and insurance.

We are, however, fully aware that conventions cannot be postponed continuously in order to bolster up the general fund, but if we must have 50 organizers on the job, let's take the convention fund to pay their salary, and when this is used up remove them from the payroll and operate within the financial limits of the general fund. By so doing we may be able to struggle along without any assessment until the next convention and then ways and means can be worked out to either effect further savings or else raise the per capita.

Fifty organizers should be able to organize every unorganized electrical worker in the United States inside of one year's time, if they go at the job with the idea of cleaning it up. However, judging from past records I believe I can say without fear of contradiction that the average cost per man organized would be around \$1,000. You can readily see that it is going to take a lot of new members to put back into the general fund the amount of money spent to put this campaign across.

Well, the holidays have come and gone again, a rather lean Christmas for a good many of our Brothers on the railroads. Three hundred thousand have been cut off in the last year. Looks like Uncle Sam will have to run them again. They are up against a tough proposition. The auto bus, auto freight and private auto competition have taken a large share of the business formerly enjoyed by the railroads and in the face of the general depression have left them in a very bad way—up against a struggle for existence. They have paid millions of dollars for rights of way while the busses enjoy the use of the public highways at a comparatively small cost; very unfair competition, I'll say.

Hello, Local No. 152. How are you all? Have not heard from you lately. Would like to call Local No. 122's attention to the fact that we have a very live wire Brother here from their local known by the brand of Orval Melby and at present he is our shop steward and a good one. We also took in eight new members last month.

Well, Brothers, ride the Milwaukee road, partly electrified, and the only card road in the northwest. SAM M. VIRGIL.

L. U. NO. 1141, OKLAHOMA CITY, OKLA.

Editor:

Thanksgiving having come and gone some of us no doubt (considering this era of unemployment or nonemployment) wonder what there is to be thankful for. Let's not be gloomy because things are slack at the present. Be thankful that ours is still a new world, where every ambitious person has a chance to better conditions for himself and others. To also be thankful for the trade unionists who fought the battle before our time, leaving with us better conditions because of their willingness to be good soldiers and sacrifice for the cause. Let us then be good warriors, make it easier for those who follow us. Then they may say "Those Brothers

helped make this old world a better place to live in."

Here's Christmas with us again. Christ wanted us all to be Brothers, yet we who earn our bread by the sweat of our brow must band ourselves together in order to deal with the money kings and industrialists and therefore secure the substances of life. So much for that.

Remember when we were kids and used to hang the biggest sock we could find on the old fireplace. We youngsters were always up bright and early Christmas morning to see what Santa had brought us. The electrical field is the best Santa Claus of today. It



WARNER BROS. THEATRE, OKLAHOMA CITY.

has many things in store for us, if we will but work to get them.

Time surely flies. New Year's right behind Christmas and "bang" there goes old 1930. Makes us all stop for a moment, turn, look back 12 months to see what we have accomplished. Would be nice if one could see 12 months ahead on the first of each year instead of reviewing the past. That would eliminate the mistakes and we would all be perfect.

Resolutions we make and most of them we break. These we should and can keep: "I will be true to myself at all times and not be afraid to say no, when yes would be easier but wrong."

"I will say nothing in a man's absence that



CREW FROM L. U. NO. 1141 WHO MADE THE WARNER BROS. THEATRE CHECK.

I would not say to his face. Be it good or bad."

"I will make friends out of any enemies that I might have, if possible."

Brother Rudewick, who is working in the field here is getting results. He's a quiet sort of fellow, doesn't let every Tom, Dick and Harry know how many irons he has in the fire. A barking dog never bites. It's the ones who look you straight in the eye and growl that do the things.

L. U. No. 1141 wishes you all a Merry Christmas and Happy New Year.

TOM RUSHING.

Women's Auxiliary

WOMEN'S AUXILIARY L. U. NO. 84, 613 AND 632, ATLANTA, GA.

Editor:

Another Christmas gone and a New Year arriving! There is always happiness and sadness, too, at this time of the year.

Our Christmas tree and entertainment were enjoyed by many members of the locals of the auxiliary and their children.

The musical numbers by Mr. Grimes and Mr. McPherson were greatly enjoyed, as were several readings by children of the members.

As usual the electrical workers' quartet entertained us in their own inimitable way. They are always ready to lend us a helping hand in our entertainments. We deeply appreciate the help of every one toward our program.

At this entertainment we installed the officers who had been elected at the last meeting. Almost every officer was re-elected. We are tremendously proud of our auxiliary and the officers. They have served untiringly.

It is indeed a pleasure to say we still have Mrs. Bruce Stroud, as our efficient, lovely president.

Each of the officers received a gift off of the tree from the auxiliary.

The quartet was remembered, as were all the children.

Instead of distributing baskets as planned, we gave a substantial check to the fund being raised by Atlanta union men for their unemployed members. It was decided this was the better way.

Our splendid city outdid itself this year in lending a helping hand where it was needed.

It was a glorious feeling to be responsible in a very, very small way for some of this help. We feel this is the sentiment of the whole auxiliary, as well as every individual who helped. We hope no one was needy and no little child unremembered on Christmas morning.

At our last meeting in December we were very glad to have Mrs. Hay become a new member. Mrs. Hay being a daughter of Mr. and Mrs. J. L. Carver.

Again it's the same old wish: Happy New Year! To be a Happy New Year this year is a whale of a job. That tiny infant 1931 will have to grow fast and furiously.

First, happiness means health. To have health we must have the necessities of life and peace of mind. To have necessities of life we must have work.

Work, to make health and happiness, must be under conditions to promote these and contentment, so it all comes back to work.

It's a large order, but we wish every one, including the editor and all the International Officers, a Happy New Year!

MRS. CHARLIE BOONE.

WOMEN'S AUXILIARY L. U. NO. 46 AND 77, SEATTLE, WASH.

Editor:

Station WATT (What), Seattle, Wash., on the air.

This season of the year seems always packed full of sentiment and emotions. Thanksgiving with its family reunions just fading into the background and Christmas with its holiday gifts and merry-making just coming into the foreground. But in these hustling days the real significance of Christmas is rapidly being lost at the altar of haste. Especially this Christmas. Stop and think what Christmas means and help some one less fortunate than you.

We held our last card party at the I. B. E.

W. Hall, Monday, November 23. Our card party is held the third Monday of each month and is a real success. At our last meeting a change was made. The hostess furnishes the cake only for the luncheon and the sandwiches, etc., are paid for out of the auxiliary fund. We feel we are not placing a hardship on our members this winter.

One of the smart affairs of this autumn was a dance and card party combined, given by the bricklayers. They especially asked the women's auxiliary to attend. We had talked of an evening party to entertain the boy friends, so the bricklayers' party solved everything. A goodly crowd was there and all reported a good time.

We cannot stand still. Let us ask at this time which way are we going? So if we are not going forward there is only one other direction which we can go—backwards. An organization well planned, well manned, functioning capably, will not slide back. Worthwhile things that are educational and an incentive, all are needed.

Wish you auxiliary members would discuss this question at your meetings. What form of entertainment and what your aim is, and then express yourself through the JOURNAL.

Life's problems are: The mistakes we make are our unsuccessful attempts to solve our human problems. Yesterday we tried to work out some problems by selfishness, and failed to get the desired result. Another time anger, and failed. But when we tried kindness and fairplay and also good humor, the problem worked out correctly.

While rummaging in an old trunk I came across an old JOURNAL, published in Springfield, Ill., April, 1918. That was during the war. It is smaller than our JOURNAL of today and the Editor was Charles Ford. Mr. Bugniet, our Editor, was vice president. That speaks well. President Broach was then an organizer, and an article goes like this: "Brother Broach is determined and capable and our best wishes are certainly with him all the time." So he has a good record even way back in 1918. I know he is a true Brother to the Brotherhood. This is the way the article starts: "Just a few lines to let you know," etc., etc.

Wages varied as they were doing much organizing in those hectic days, when only 25 per cent of the men were union men. In Montana, \$7.50 for eight hours. In Cincinnati, \$5.50 and worked until noon Saturday. Linemen, \$55 a month. We have made great strides since 1918, due to organized labor. More power to the unions!

Best wishes for a Merry Christmas and Prosperous New Year to all.

MRS. R. C. SIMPSON.

Radio Detector Finds Single Lost Coin

British archeologists engaged in digging up the remains of Roman civilization in England and of the still earlier civilizations of Babylonia and Egypt have devised a radio detector of metals, said to be so delicate that not only will it locate a single coin buried in the debris of some ancient city but will tell whether the hidden coin is lying flat on its side or is standing on edge. The device is proving invaluable, it is reported, in such work of excavation, since it often is possible to locate by its aid spots where digging will be rewarded by finds of metal articles, without employing the usual expensive method of cutting deep trenches back and forth across the site to be investigated. Even when such trenching is done, some important metal object may happen to be missed a few

inches by a trench and never discovered. The radio detector, on the other hand, is said to be capable of finding such objects infallibly. One shortcoming of the instrument, however, is that it will not locate pottery or objects made of stone, bone or wood, but only those of metal. The device consists of a set of coils in which radio oscillations of a special variety are kept in circulation by vacuum tubes like those of a radio receiver. When these coils are carried along close to the ground any metal object not too far underneath disturbs the oscillations in the coils. This disturbance can be detected by a suitable meter and serves as the indication of nearby metal.

Inasmuch as most good things are produced by labor, it follows that all such things ought to belong to those whose labor has produced them. But it has happened in all ages of the world that some have labored, and others, without labor, have enjoyed a large proportion of the fruits. This is wrong, and should not continue. To secure to each laborer the whole product of his labor as nearly as possible is a worthy object of any good government.—Abraham Lincoln.

GOMPERS WAS ARTIST AT HANDLING MEN

(Continued from page 21)

The American Federation of Labor has been representative of an aristocracy of labor.

The very formation of the Federation was the result of a secession movement, a splitting-off of the more favorably situated groups of workers from the rest. In effect, the skilled trades decided that they could do better for themselves by going it alone, and by disassociating themselves from the unskilled. When the Knights of Labor, with their proud motto of solidarity, came tumbling down in the latter eighties, the skilled trades marshalled themselves into the Federation, under the banner of "Sauve qui peut."

The Federation has retained the character it possessed at the beginning. The organizations affiliated with it have never included more than 17 or 18 per cent of the entire wage-earning class. These organizations have displayed little zeal in extending unionism among the remainder of the workers, and rather more in the decade and a half following upon the foundation of the Federation than afterwards. In fact, in one strike after another, so marked has been the desertion of the unskilled by the skilled, organized workers, that among considerable sections of the unskilled workers the mention of the American Federation of Labor is an occasion for booing and hissing.

Law of Life: Self-Preservation

The policies followed by the organizations within the Federation have all been of a nature designed to benefit themselves without regard to their effect upon the rest of the working class. Take the Federation's repugnance to hour and wage legislation. Obviously, such legislation would be highly appreciated by the worst-off sections of the workers, and even by some groups within the Federation. But the Federation has been dominated very largely by the building and printing trades and to these groups such legislation would be of no benefit, since it would enact standards far below what they have already obtained. Motivated solely or largely by their self-interest, it is not to be expected that such groups would care about pushing legislation that could be beneficial only to others.

The same factors explain the Federation's indifference to social insurance and old age pensions, and the acquiescence by the rank and file members in the decision of Gompers and other leaders to avoid these measures. Comparatively well off, the groups that dominate the Federation have not felt any urgent need for this legislation. Or at any rate the need of this sort of legislation was not sufficiently urgent to cause them to overthrow the administration's policy. [Editor's Note: Mr. Reed will have to revise this assertion in the light of present happenings.]

These identical factors apply also in the case of government ownership of industries. To the skilled groups who have secured from their private employers better wages and hours than obtain in government employment, such employment does not appear attractive, whereas for the unskilled workers government employment would be a step upwards. In general socialism as a philosophy had and has little appeal to the aristocratic, exclusive craft groups that dominate the Federation.

On the whole, therefore, the Federation's policies reflect the character and position of the groups that compose it, and Gompers' ideas, in turn, were essentially in tune with the ideas of the dominant groups in the Federation. From this angle, it is seen that it is idle to expect the Federation to alter drastically its present philosophy unless there is a change in its makeup due to the infiltration of workers from lower strata of the working class, or unless the groups now dominant in the Federation are themselves changed in their character due to inability to maintain a superior position over other groups of workers. And it may confidently be expected that when, as and if, workers from the lower strata of the working class organize and enter the ranks of the Federation, the Federation will swing to the left and adopt a more radical program.

Gompers Expressed His Group

To what extent did Gompers lead the movement? To what extent did he as a leader influence its ideas and policies? These questions have been partially answered in the paragraphs above. A more complete answer rests upon the following factors: By nature Gompers was primarily an organizer, a leader of men in action, not a philosopher. His leadership was not a leadership in ideas. He was not one to take hold of new, unpopular ideas and to convert the movement to those ideas. Rather his leadership was a leadership in tactics, a leadership in the day-to-day activities of the movement. As a leader followers were necessary to him, and he hesitated ever to separate himself from his followers. Now above all else Gompers wanted to remain president of the American Federation of Labor. This is not to suggest for a moment that Gompers in his own eyes was unidealistic, that he put his own personal career above the welfare of the movement. Quite the contrary. No man could have been more idealistic. He devoted his life to the movement, in the early days went through privation and poverty for it. He would have made any sacrifice to advance the cause of labor. But he had come to identify himself with the movement, to believe that his hands were the hands preeminently fitted for molding its destiny, that the Federation could suffer no greater loss than to lose him as its leader. And being a very practical man, he built up a machine to hold him in office, concerning whose strength and effectiveness one leader remarked that "it beat anything in the American Federation of Labor." The Federation was and is a very political body. Often Gompers, in following the star of his ideal had to walk through mud.

Now Gompers knew that to keep the presidency it was necessary for him to be close in his ideas to the key men in the Federation whose votes controlled the presidency, and that meant that he had to be fairly close to the ideas of the rank and file of the movement. He could advocate only ideas that were not too far in advance nor too far in the rear of the then present mind of the Federation. As the movement changed its policies, he had to go along. And Gompers did this. In one instance after another he compromised, kept the headship of the Federation by leading it in directions that he personally did not wish to see it go. Really there were few of Gompers' policies that he would not have sacrificed in order to retain the leadership of the movement. In part, Gompers' leadership, especially after 1900, was an exercise in listening ear to the ground for the prevailing trends of sentiment within the Federation, and then having discovered where the movement was going, making a "hop, skip and jump" and placing himself at its head. As leader of the movement he was its mouthpiece and weather-vane.

Missed Seriousness of Machine Production

But only in part. Gompers did believe firmly in the rightness of certain policies and he fought to impress these policies upon the movement. Certain of these policies were progressive. He believed in the extension of organization to all workers. He used his influence to get the unions to drop their restrictive rules and admit women and unskilled workers. Others were reactionary. In counselling individualism, the avoidance of legislation in regard to wages, hours, and social insurance, Gompers did grave harm to the movement. The effect of Gompers' teaching in this respect was to help cause labor to be, politically, a nonentity. [Editor's note: this sweeping assertion is, of course, not true to fact. Labor has a large bloc of men in Congress.] While labor has spared using the state to gain its ends, other social groups have not hesitated to make use of it. In counselling avoidance of social insurance, Gompers left the way open for employers' "welfarism," group insurance, old-age pensions, etc. Thus instead of state paternalism there is the paternalism of the employers, and the effect has been to strengthen the employers and to weaken the unions. Finally, in other, more important matters, Gompers simply drifted along with the movement. From, say, 1900 on the movement has been entering an industrial environment very different from that in which the craft unions of the United States were formed. Larger and larger aggregations of capital, consolidation among the ranks of the employers, the increasing mechanism of industry, obliteration of craft skills, continuous technical innovation, employers' welfarism—these are the difficulties which the trade union movement must meet, if it is to continue to exist, let alone grow. In the face of these difficulties Gompers showed no constructive leadership. Towards the very first step in a program to meet these difficulties, a shift in the basis of organization from craft to industry, and closer consolidation of the movement, Gompers was indifferent, not to say hostile. In the last two or three years of his life Gompers wrote his autobiography. In it he discussed the rise of the trade union movement, its trials, its "true" and "wise" policies, and the role he had played. But in all its many pages, one finds not the slightest awareness on Gompers' part of the problems which the increased mechanization of industry and the concomitant developments of the twentieth century had raised for the craft unionism of the Federation.

Gompers came to the labor movement at the beginning of an epoch. He helped discover the policies and principles that were right and good for that epoch, and led in building the movement upon those policies and principles. Then the movement passed into a new epoch. But Gompers never recognized the new epoch had arrived.

ELECTRICAL WORKERS AND 24-HOUR HIGHWAYS

(Continued from page 19)

1. The vision of automobile drivers will be extended thus bringing night-driving conditions nearer to daylight conditions. Pedestrians, obstacles, dangerous curves, and road signs, such as "Slow," "Stop," "Danger," "Cross-Road," "Cattle Crossing," "Railroad Crossing," will be seen more easily, readily, and at a distance sufficiently far ahead to allow complete control of the car.

2. Vision will be helped by the alleviation of the glare-trouble through the reduction of contrasts. A headlight in the daytime has no effect upon the vision. Decided contrasts are the largest causes of glare discomfort from a dazzling headlight. By the installation of a highway lighting system contrasts are reduced and the glare which blasts the sharpness of vision is minimized so that the control of the car becomes a greater certainty.

3. Crime will be lessened. The criminal loves darkness rather than light. Farmers living on lighted highways have reported less chicken and petty thieving about their places after highway lights were installed.

4. Driving conditions in foggy weather will be greatly ameliorated. Although highway lighting may not be expected to completely light the roadway during heavy fogs, it will prove to be of great service as markers to guide the autoists along the roadway and warn of curves.

5. Repair jobs along the highways will be aided and hastened.

Thus by extending the range and sharpening the vision of autoists accidents will be reduced with a saving in life and property; crime reduced; running time increased; night driving will become more of a pleasure, bringing about more night traffic; and congestion, both by day and night, will be reduced to a minimum. The roads will then have greater capacities and will be working more in accordance with investments therein. Actual check of traffic has revealed a 100 per cent increase of travel during the night after highway lighting was installed.

But there are other advantages than those to the auto drivers:

1. To the residents along the highways. The telephone, tractor, free delivery, and paved roads have contributed immensely to the social, educational and commercial well-being of rural America. The United States Department of Agriculture reports that the American farmer, by the use of powered machinery has increased the earning power of each person—

2.3 times	over the English
2.5 times	over the Belgian
2.5 times	over the German
3.2 times	over the French
6 times	over the Italian
20 times	over the Chinese

Yet the American farmer is in a great measure deprived of electric powered machinery. It is estimated that there are 40,000,000 American farm homes without the advantages of electricity.

It costs, on the average, \$1,200 per mile to build electric lines into rural sections.

Someone has to put up this money. The light and power companies, as a rule, are willing to spend approximately two and one-half times the annual revenue in building a line. Should the guaranteed annual revenue be not sufficient to justify the building of a line entirely at their expense, the farmer, in order to have electric service, must pay the difference. When the farmer puts up money to assist in building a power line he has less left to buy electric powered machinery and equipment. His earning power is thereby lessened. Or shall we say that if his farm were electrically equipped he could increase his earning power over that mentioned in the preceding paragraph, to say nothing of the convenience and comfort which would be enjoyed?

A scientifically designed highway lighting system calls for at least 17 lighting units per mile, each equipped with 250-watt lamps. If the lighting units, the electrical conductors to serve them, the labor to install both, and the electrical energy, including maintenance, were furnished by an organized and responsible body, it is our opinion that the electric light and power company executives would build at their own expense the power lines to serve the highway lighting systems and the residences en route.

From the farms come the food, clothing and commerce of the nation. What would be more appropriate than for highway lighting to blaze the way to rural electrification?

The worry of parents on the farms would be greatly reduced if they knew when their children drove to the city for the evening they would have the aid of a lighted highway in making their return home safer.

Farm isolation would be greatly reduced. When night settles on residences along unlighted highways they are enveloped in a little world of darkness all their own. Highway lights would keep the neighbors' homes visible, make walking from one to the other safer, and so decrease isolation.

2. In the increase of real estate values en route:

a. By tending to expand the city along the highways. It has been reported more than once that farms up for sale received no offers until after the highway had been lighted.

b. By checking farm to city movement.

3. In the advertising and creation of good-will. The good-will of the tourist is worth money. Think also of the advertising value to the northwest and the state of Washington in particular, when tourists, upon their return home, spread the news of the convenience, comforts, and safety of the lighted highways—definite signs of progress and prosperity—in this section. We boast of the abundance of our electrical energy. How better could it be applied than in thus advertising the northwest?

Lighted highways are as the welcoming arms of every city into which they lead. They are inducements to drive into the city for the evening, resulting in window-shopping; and remember "Tonight's window-shopper becomes tomorrow's customer."

Is it any wonder, therefore, that in the minds of those who are thinking about the future of our highway systems and are concerned about bringing them to greater service, that highway lighting is being more and more considered as a necessity? No less an authority than Robert T. Shaw, of the Massachusetts Institute of Technology, says: "Scientific illumination of highways to take care of heavy traffic, to increase safety of travel, to reduce congestion, and to spread the distribution of electrical energy, is an important and necessary factor in our national development."

Again we say that highway lighting

should be considered in the light of a wider sphere than just a benefit to the motorist.

There was a time in the history of advocating highway lighting that in order to make a good case it would have been advisable to cite examples of highway lighting installations. Highway lighting now is no longer in the experimental stage. There are so many successful installations in the United States that it would occupy too much space and time to list them. Perhaps the area most extensively lighted is that surrounding the city of Detroit, where there are more than 700 miles of highway lighting operating at present. Florida has a great number of miles. California, 25 to 30. Washington, none.

The equipment used ranges all the way from bare lamps in units with reflectors which are nothing more than markers, and good only for slow-moving traffic, to the latest type of enclosed units with refracting glassware surrounding the lamp.

The best and most economical solution has been found to be the use of the dust-proof units equipped with totally enclosing glassware having refracting characteristics either suspended over the roadway or installed on brackets attached to poles at the side.

In planning highway lighting there are two important conditions to be met:

1. Providing a clear view of the whole roadway for considerable distance ahead of the car.

2. Elimination of glare within range of the vision of the driver.

Whether the distribution system should be multiple or series will depend upon the section of highway to be lighted. Generally speaking, it may be safe to state that the most economical system to be used will be the series.

In classifying the highways for illumination purposes we may divide them into two classes:

a. The highways in and around the cities along which poles with power lines have already been installed.

b. Highways bearing large traffic along which there are no power lines.

Naturally the first class offers the most economical opportunity for beginning the installation of highway lighting systems.

A Scientific Highway Lighting System

The lighting units should be as nearly weather-proof and dust-proof as possible, equipped with totally enclosing and refracting glassware.

When the lighting units are installed along the sides of the road, preferably staggered, they should be attached to poles by means of brackets and equipped with asymmetric refractors; that is, glassware with prisms designed to throw the greatest proportion possible of the lamps' light output towards the roadway.

When the units are suspended over the roadway they should be equipped with the type of refracting glassware known as the two-way refractor, the beams of which should be directed at an acute angle to the line of traffic so that traffic follows with the beam and not against it.

If the spacing is 150 to 200 feet they should be equipped with not less than 400 candle-power lamps, and mounted 18 to 25 feet above the street surface. If spaced over 200 feet, and certainly not more than 300 feet, they should be equipped with at least 400 candle-power, preferably 600 candle-power lamps, and the mounting height should be 25 to 35 feet above the road surface.

The mounting height should be one-eighth the spacing.

There is a prevalent belief that the cost

of highway lighting is too expensive. As a matter of fact it is very low when compared to the cost of the road, the economic loss in the part-time use of that costly road, the property and life destruction which is annually taking place on that road during the night, and the benefits mentioned above to others than motorists.

The cost of a modern scientifically designed highway lighting system completely installed including poles, etc., is approximately \$2,500 per mile or 5 per cent of a \$50,000 per mile road. The maintenance in A-1 condition, including energy, and lamp renewals, is \$750 annually, or 1.2 per cent.

With poles and power lines furnished, as outlined elsewhere, the cost per mile would be \$1,750 per mile or 3.5 per cent. The maintenance remaining the same.

Surely one life, if it may be saved by the installation of a lighting system, is worth the construction amount of \$2,500, or \$1,750, as the case may be, and the maintenance amount of \$750. We are quite certain that if the life saved were the child of any one of us or a relative we would consider this amount small.

Furthermore, in view of the expense to which we are going these days to make our highways the very best possible, to eliminate congestion, to speed up traffic, and cut down life and property loss, this is a small sum to add to the cost figures in order to bring about these results, to say nothing of benefits to the rural citizenry, the aid in the back-to-farm movement, the lessening of crime, the advertising value to the northwest and the creation of good-will.

We offer, as to the matter of who should foot the bills, a suggestion that the source from which comes the money to build the highways is also the source from which should come the money to install the lighting system and maintain it. Is it just as logical for the nation, state, and county to light the highways as to construct them and maintain them?

At present, in the state of Washington, there is no means provided by which highways may be lighted. It can be done successfully only by state legislation. Our laws need be amended to install or permit the installation of highway lighting if we are to have the same. Several states have already made it possible, and others are considering it at present.

One township in Michigan has voted \$200,000 to build and finance a highway lighting system for 20 years. Every intersection, railroad crossing, and every one-quarter mile of roadway in that township, will be lighted with a lighting unit equipped with a 600 candle-power lamp which consumes 340 watts.

In order to bring about the amending of our state laws so that there may be collaboration between federal, state and county governments in the lighting of our highways an educational campaign must be launched.

It is our belief that the movement will have active support from—

1. Federal, state and county officials.
2. Boards of trade and other civic organizations en route.
3. Owners of motor vehicle transportation lines.
4. Resorts and suburban hotels.
5. Abutting and nearby farmers.
6. Central stations and the electrical industry as a whole.
7. Auto clubs and associations.
8. National safety councils and law enforcement officials.

Perhaps the agencies which would be only too glad to take the lead in this matter are the good roads and automobile associations, as they have been the leaders for so

many years in advocating improved highways.

To sum up this matter we quote the following from a recent issue of a magazine:

"Light Your Highways

"For safety—Take headlight glare out of drivers' eyes and you cut down motoring accidents at night. Quick thinking goes with quick seeing. It is easier to size up the situation on the well-lighted highway.

"For speed—Cars move faster and more confidently on the well-lighted road. The right sort of lighting relieves congestion and helps to solve other traffic problems.

"For convenience—The lighted way 'round is the shortest way home. Miles don't matter when you can drive without strain or worry.

"For business—Trade thrives in well-lighted towns and it is better still if these towns have well-lighted highways radiating from them. Light attracts and stimulates commercial activity.

"For prosperity—Intelligent planning makes active business a permanent thing. It is the reward of the community which meets a modern problem in a modern way."

We close by submitting that this organization can do no better than to throw its whole-hearted interest, energy and co-operation into securing for the state of Washington "24-hour highways."

INTERNATIONAL JOINS WCFL'S WORLD FAMILY

(Continued from page 23)

New Zealand	Wellington
Sweden	(Harbores Fyrplats)
	(Vamlingho, Gotland)
Venezuela	Caracas
Virgin Islands	St. Thomas
U. S. A.—	
Arizona	Phoenix
California	Arcadia
California	Long Beach
California	Los Angeles
California	Oakland
California	San Bernardino
Connecticut	Bridgeport
Georgia	Atlanta
Illinois	Chicago
Illinois	Chicago Heights
Maine	Camden
Maine	Cumberland Mills
Massachusetts	Lowell
Massachusetts	Salem
Massachusetts	New Bedford
Massachusetts	Peabody
Michigan	Detroit
Minnesota	Minneapolis
Mississippi	Fayette
New Jersey	Bridgeport
New Jersey	Newark
New York	Binghamton
New York	Brooklyn
New York	Brooklyn, S. S. Nevanan
New York	Floral Park
New York	Cedarhurst, Long Island
New York	Woodside
New York	New York City
North Carolina	Sylva
Pennsylvania	Abington
Pennsylvania	Allentown
Pennsylvania	Philadelphia
Oregon	Lebanon
South Carolina	Columbia
South Carolina	Greenville
Texas	El Paso
Texas	Groesbeck
Texas	Waco
Utah	Salt Lake City
Washington	Seattle

IN MEMORIAM

C. K. Murray, L. U. No. 18

It is with deep regret and sorrow that Local No. 18, I. B. E. W., records the passing into the Great Beyond of our worthy Brother, C. K. Murray; therefore be it

Resolved, That our sincere sympathy be extended to the bereaved family; and be it further

Resolved, That a copy of these resolutions be sent to the family of the deceased, a copy be forwarded to the Worker for publication and a copy be spread upon our minutes; and be it further

Resolved, That our charter be draped for a period of 30 days, and that we, the members of Local No. 18, I. B. E. W., being lawfully assembled, stand in silence for one minute in further tribute to his memory.

RAY A. MANGAN,
L. R. SISSON,
H. E. BINEHAM,
Resolutions Committee.

Earl E. Perrell, L. U. No. 39

Whereas in His infinite wisdom it has pleased Almighty God to call from this earthly home Brother Earl E. Perrell; and

Whereas we, the members of Local No. 39, desire to express our deepest regret and sympathy to those who remain to mourn his loss; be it

Resolved, That in lawful assembly we stand in silence for one minute in tribute to his memory; and be it further

Resolved, That a copy of these resolutions be sent to his family, a copy to our official Journal for publication and a copy spread on the minutes of this local union.

THE COMMITTEE.

Oscar L. Beaver, L. U. No. 66

It is with saddened hearts and a feeling of deep regret that the members of Local No. 66 are separated from our beloved Brother, Oscar L. Beaver, who met with sudden death while in the pursuit of his duty. We mourn the death of his mother and brother who lost their lives that they might be at our Brother's funeral. The bereaved friends and relatives have our sincere sympathy.

Whereas this local union recognizes the loss of one of its fine young Brothers; be it

Resolved, That in the appreciation of his character and respect to his worthy services, a copy of these resolutions be sent to his loved ones, a copy furnished the Journal of Electrical Workers and Operators for publication and a copy spread upon the minutes of Local No. 66; be it further

Resolved, That our charter be draped for 30 days in his honor.

J. L. HOWARD,
M. S. COFFEY,
BARTON WATERS,
Committee.

James W. Evans, L. U. No. 66

The sudden death of Brother James W. Evans, caused by an automobile accident at Corpus Christi, has deeply grieved the members of Local Union No. 66.

Whereas we, in a spirit of Brotherly love, pay tribute to his memory by burying him in our cemetery beside and among Brothers who have passed on before him, in order that his memory shall live on through the ages; therefore be it

Resolved, That Local Union No. 66 send a copy of this resolution to our International Office to be published in The Journal of Electrical Workers and Operators, and a copy spread upon the minutes of this local union.

J. L. HOWARD,
C. W. CLARY,
H. MUNSTER,
Committee.

Webster B. Boger, L. U. No. 66

Obviously, as we journey forward, inevitably there comes a parting of the ways. Our love, need or relation will not shelter or protect those who have been chosen and called to that Great Beyond by the Almighty God; grim death swallows up its victim completely and leaves behind but a memory.

The passing on of Brother Webster P. Boger has laden our hearts with deep sorrow, but the wholesome and pleasant memory that has been instilled in the minds of his Brothers and many friends by his courage and faithful effort to advance our cause, has inspired and left with us a lovable memory of him which we shall always cherish.

Whereas in appreciation of such a loyal member who has contributed so much toward the furtherance of our Brotherhood for so many years past; be it

Resolved, That in his honor, a copy of this tribute be sent to his loved ones, a copy sent to the Journal of Electrical Workers and Operators for publication and a copy spread upon the minutes of this local union; and be it further

Resolved, That in respect of his untiring devotion, the charter of Local Union No. 66, of the International Brotherhood of Electrical Workers be draped for 30 days.

J. H. SHIPPS,
J. S. POWER,
H. W. HEREFORD,
Committee.

F. S. Sparling, Jr., L. U. No. 77

Whereas in His infinite wisdom it has pleased the Almighty God to call from our midst a true and loyal Brother, F. S. Sparling, Jr.; and

Whereas we the members of Local Union No. 77, express our deepest sympathy to his bereaved family; be it

Resolved, That the charter be draped for a period of 30 days in memory of our departed Brother; and be it further

Resolved, That a copy of these resolutions be sent to the family, a copy be sent to the International Office for publication in the Journal and a copy be spread on the minutes of this local union.

FLOYD W. MILES,
E. M. McDONALD,
G. A. MULKEY,
Committee.

Fred Schultz, L. U. No. 195

Whereas it has been the will of Almighty God to take from our midst Brother Fred Schultz, for many years a true and loyal member of the International Brotherhood of Electrical Workers and Local Union No. 195 has lost a highly respected member; therefore be it

Resolved, That our charter be draped in mourning for a period of 30 days, that a copy of this resolution be sent to his bereaved family, a copy to our International Journal for publication, and a copy be spread on the minutes of this our local union.

EDW. G. WEGNER,
Recording Secretary.

A. A. Loden, L. U. No. 520

It is with deep sorrow that we, the members of Local No. 520, I. B. E. W., mourn the loss of our esteemed Brother, A. A. Loden. His noble qualities, kindly spirit, and his loyalty, will always be remembered with deep affection by those who knew him best; therefore be it

Resolved, by Local No. 520 of Austin, Texas, that our most heartfelt sympathy be extended to the widow and children of our departed Brother Loden; and be it further

Resolved, That our charter be draped for a period of 30 days and that a copy of these resolutions be sent to the bereaved family of our late Brother Loden, a copy to be sent to the official Journal for publication and a copy spread upon the minutes of Local 520 of the International Brotherhood of Electrical Workers.

HENRY PAT CAIN,
D. B. WAGGONER,
W. G. DECKER,
Committee.

F. A. Reed, L. U. No. 532

The members of Local Union No. 532, I. B. E. W., unite in sympathy with you in your bereavement. We knew Brother F. A. Reed

as an honest and faithful friend, which is the highest tribute one man can pay another. We sincerely pray that the grief of his sudden parting shall soon pass away, leaving your hearts and minds at peace; be it

Resolved, That our charter be draped for 30 days in respect to his memory, and that a copy of this resolution be sent to the family of our deceased Brother, a copy be sent to our official Journal for publication and that a copy of it be spread on the minutes of the local union.

J. R. SWAIN,
ALEX. MUTCH,
D. NELSON,
Committee.

Dennis Burke, L. U. No. 636

Whereas the members of Local Union 636, I. B. E. W., sincerely and deeply regret the untimely death of our beloved and esteemed Brother, Dennis Burke; therefore be it

Resolved, That we extend our sincere sympathy and condolence to his bereaved wife and relatives in their hour of sorrow; and be it further

Resolved, That our charter be draped in mourning for a period of 30 days; that a copy of these resolutions be sent to Mrs. Burke, a copy to the official Journal, and a copy spread on the minutes of Local Union 636, I. B. E. W.

ROLAND SMITH,
JOHN BROWN,
W. B. CRAIG,
Committee.

DEATH CLAIMS PAID FROM DECEMBER 1 TO DECEMBER 31, 1930, INC.

L. L. No.	Name	Amount
5	James E. Hall	\$1,000.00
58	A. Weniger	1,000.00
3	Joseph Keller	650.00
1	Henry Finke	1,000.00
2	W. E. Apengeman	1,000.00
784	L. P. Cantion	300.00
66	Oscar R. Beavers	300.00
595	Jack R. Corbett	300.00
9	W. A. Powell	1,000.00
41	Julius Armbruster	1,000.00
58	Wm. H. Moses	825.00
I. O.	R. H. Harrison	1,000.00
134	W. R. Bayless	1,000.00
134	Wm. G. Rosier	1,000.00
195	Fred M. Schultz	1,000.00
77	Frederick Sparling	300.00
134	Walter A. Griebahn	825.00
84	J. T. Gary	1,000.00
595	W. F. Cronin	1,000.00
I. O.	Joseph Cox	1,000.00
792	H. D. Gunn	1,000.00
1002	E. H. Whittington	1,000.00
I. O.	Jos. T. Gribbin	1,000.00
3	Richard Getz	1,000.00
520	A. A. Loden	475.00
3	Chas. Strnad	1,000.00
3	John Nelson	1,000.00
212	Jos. M. Stiene	1,000.00
430	John Hawley	825.00

\$24,800.00

Total claims paid from December 1 including December 31, 1930

\$24,800.00

Total claims previously paid

2,144,886.10

Total claims paid

\$2,169,686.10

To achieve what the world calls success a man must attend strictly to business and keep a little in advance of the times.

The man who reaches the top is the one who is not content with doing just what is required of him. He does more.

Every man should make up his mind that if he expects to succeed, he must give an honest return for the other man's dollar.

Grasp an idea and work it out to a successful conclusion. That's about all there is in life for any of us.—Edward H. Harriman.

THE GHOST PARADE

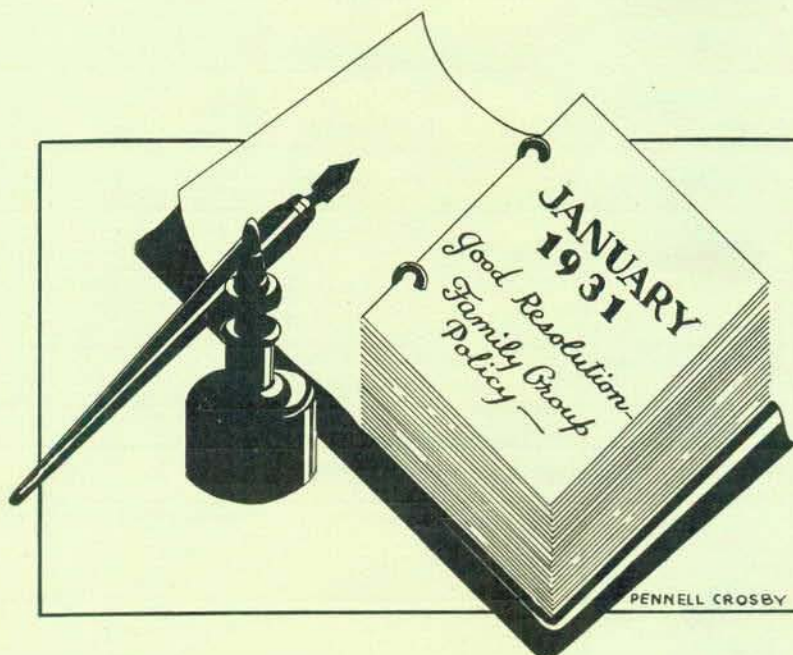
The New Year brings an accounting—a taking stock of what we have accomplished the past months, and with it comes that procession of nagging little memories, haunting us with their reminders of what might have been. That's why we make good resolutions—to shut out these ghosts.

Perhaps one whispers of the time Dad said:

"Well, Bud, you'll be finishing high

school in another month—how would you like to take a year or two special work at college?"

And your unhesitating bright answer: "Thanks awfully, Dad, but the Smithson Grocery Company have offered me a job clerking at \$15.00 a week as soon as school is over. I'm pretty anxious to be making my own money, you know, so I believe I'll take it." **Precious years of education gone.**



You recall the time, some years later, when you came dashing home all enthused over a wonderful used car bargain. You can still see the rather bewildered expression on your wife's face as she said:

"But I thought our savings account was for the first payment on that bungalow on Hawthorne Street—it's a really good buy."

YOU ARE STILL COLLECTING RENT RECEIPTS.

And again you experience the "let down" feeling you had when the medical examiner for the life insurance company would not O. K. your application.

ELECTRICAL WORKERS

Is there any better way to add to your pleasant memories than the knowledge that your wife and children are insured in the Family Group?

MAKE THAT YOUR NEW YEAR'S RESOLUTION AND SHUT OUT ANY GHOSTS OF REGRET.

Send in the completed application on the next page; we'll send additional applications for the rest of the family on request.

APPLICATION FOR INSURANCE

ELECTRICAL WORKERS' FAMILY POLICY

UNION COOPERATIVE INSURANCE ASSOCIATION,
Washington, D. C.

I certify that I am the of a member
(Give relationship)

of the International Brotherhood of Electrical Workers, Local Union No., and I hereby apply for.....

units or \$.....life insurance, and will pay \$.....each.....
(Year, half-year, quarter or month)

I certify that I have no impairment in my health or physical condition, and have no deformity, except.....

(State any exceptions)

Date of Birth.....Occupation.....Race.....
(Month-Day-Year)

Birthplace.....Sex.....

Beneficiary.....Relationship.....
(State full name and relationship of person to whom insurance is to be paid at your death)

Address of Beneficiary.....

My name is.....
(Print your name in full—not initials. If married use own name, such as "Helen Smith" and not husband's name, as "Mrs. James Smith")

My address is.....
(Street and number—City and State)

Date.....
(Signature in full)

QUESTIONS BELOW TO BE ANSWERED IF APPLICANT IS A MINOR

1. Father of Child.	Full Name	Birthplace
	Birth Date	Occupation
2. Mother of Child.	Full Name	Birthplace
	Birth Date	Occupation
3. Premiums will be paid by:	Name	
	Address	

(Signature of Parent or Guardian)

(The Union Cooperative Insurance Association reserves the right to reject any applicant for this insurance for any cause whatever and in case of rejection will return to the applicant the full amount of the payment forwarded with this application. The insurance will become effective on date issued by the Union Cooperative Insurance Association at its Home Office in Washington, D. C.)

NOTE: Age limits, 1 to 50 years. Issued in units of \$250.00. Limit of insurance for any one person: Ages 1-5, inclusive—\$250.00. Ages 6-50, inclusive—\$500.00.

Cost per unit: If paid annually, \$3.60; Semi-annually, \$1.80; Quarterly, 90 cents; Monthly, 30 cents or "Penny a Day."

Receipts issued for premium payments will show date next payment is due. No additional premium notices will be sent.

Make Checks Payable to
INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS
G. M. Bugniacet

and Send with Application to International Brotherhood of Electrical Workers, Washington, D. C.

(Family Group Policy—Application Copyright, 1928, J. R. Biggs)



Cut Here

Cut Here

TECHNOLOGICAL CHANGES AND UNEMPLOYMENT

(Continued from page 17)

ing aside of displaced workers has been accompanied by no more concern on the part of the industry itself or society as a whole than might be given to a piece of discarded machinery. It is only as the problem becomes acute and threatens to become increasingly so that we can get a hearing for the facts in the case.

Time forbids an exhaustive account of displacement of men by machines. Examples are familiar to you all. To quote just a few rather striking examples from a recent authority,[†] we find evidence that in the coal industry, where in 1891 only 6 per cent of the cutting was machine work, in 1923 67 per cent of the coal was machine cut. Rail employees declined 150,000 from 1923 to 1928. The New York subway, in adopting automatic control, made it possible for one motorman and one guard to do the work of 11. In the pig iron industry, seven men now cast what formerly was done by 60. Three firemen and a gauge now take the place of 120 stokers in large industrial plants. Since 1914 a New York paper box factory quotes its output as an increase of 121 per cent, yet it employs 32 per cent fewer workers. The state of Ohio reported in 1927 that 11 per cent more square feet of building had been done by 15 per cent fewer men.

And now, as though the story had merely begun, they tell us of the wonders that are to be performed with a greater understanding and development of the vacuum tube as used in modern radio and telephone equipment. Those who know, compare the invention of the vacuum tube with the discovery of the power of the lever in importance. With its future development almost inconceivable, possibilities in the electrical future are presented. Already in its infancy we read—not dream—of an electric ear in a Newark airport so attuned to a peculiar note of a certain siren that when a particular airplane sounds its call the electric ear hears, as it were, and answers by operating a switch that floods the airport with light. The same authority tells of an electric eye so constructed at the entrances of the international bridge at Detroit that it counts the vehicles that pass, registers the number in a book and reports to the central office in case of any traffic congestion. A similar eye controls the light in a New Jersey school and, when the sun's ray dims, automatically turns on the switch. As a result of this invention, a tobacco company installed photoelectric cells to sort cigars. The human sorter had been able to detect but six shades of brown and sorted into six grades accordingly. This newly installed electric eye detects 10 shades and sorts the cigars accordingly and so another woe is added to the already overflowing cup of the cigar maker. These are but tiny evidences of the development we may expect when this device is perfected to a greater degree. An engineering journal tabulates already 178 applications of the principle of the vacuum tube to industry, art, aviation, navigation and railway and adds that its development has only begun.

Professions Hit

Nor is this displacement of man by machine confined to the manual laborer. Who has not read and perhaps signed the musicians' appeal published so widely in their almost futile attempt to stay the inroads that mechanization is making in their profession through the medium of the radio and the talkie. Expert clerical help is day by day replaced by machines with an almost

uncanny ability to do the most intricate tasks, and without a mistake! We read of a pen, so constructed and in use, that signs 20 signatures on 20 separate checks at one stroke, and we see here the inroad of the effects of technological changes in even the inner offices.

Those of you who are union men could continue this story quite indefinitely, giving instance after instance of your difficulty in holding your trade against the invasion of the machine and the unskilled worker. Those of you who are employers could give an equally graphic picture of the marvelous efficiency of industry under the newly mechanized and reorganized production—a picture with all the interest and fascination of a conquest, a story that reminds us of Aladdin's lamp, but with what personal tragedies strewn along the way!

So much for the facts regarding the displacement of men in our major industries today. We have only given examples, the like of which could be multiplied indefinitely, to concretely bring before you the fact that unemployment because of technological changes does exist in practically all walks of industrial life. What of the consequences? Here we enter a highly disputed field. We must differentiate at once between permanent and temporary consequences. And we must also keep constantly in mind the effects both to society as a whole and to the individual laborer.

Effects Procured

As to the permanent effects of this technological displacement the opinions of leading authorities are highly controversial. The argument goes back and forth and, because of lack of statistical data over a long period, remains unsettled. Those who are optimistic as to the permanent results counsel that this is not a new problem; that the period of adjustment will pass, that the lowered costs of products made possible through technological changes will so increase the demand for goods and make possible the production of new goods that more, rather than fewer, workmen will be needed; that even if the saving is not passed on to the consumer in lowered costs, the surplus will be used by the employer and will create new demands for new luxuries that will necessitate more workmen in some fields. They point out that this has been the story throughout the nineteenth century and they trust it to continue. The optimist takes much consolation in the large increase of employment in the so-called "service industries." The increase of this group, including teachers, beauty parlor employees, radio personnel, insurance agents, canvassers, taxi-drivers, filling station employees, doctors, realtors and many other groups has been tremendous in the first quarter of this century. These groups, which are referred to by Stewart Chase as the "blotting paper" industries because they are expected to absorb the men released from major industries, have unquestionably given employment to many released by mechanical changes.

Those who are less optimistic, on the other hand, question whether a lowering of the cost of a product as a result of machine savings will increase the demand sufficiently to offset the changes made by the introduction of machinery. They argue that this can be answered only by taking each product separately and after a study has been made of the elasticity of demand for the product in question. If the demand is elastic—that is if a slight fall in price will increase the amount of the product consumed—then the same number or even more laborers will be eventually employed in that industry. If the demand for goods is in-

elastic—that is increased consumption comes only after a decided fall in price, if at all, then a slight lowering of the price that may result from the introduction of machinery, will not be sufficient to increase the demand and retain the original workers. This elasticity and inelasticity of demand has been abundantly demonstrated in the radio and auto on the one hand and farm products on the other. A lowering of the price in radios and autos has increased the demand tremendously, but as to farm products, in spite of the bill board entreaties to eat another slice of bread and help save the farmer, the response is inadequate. The one less optimistic, while admitting the large increase in the number employed in service of one kind or another, predicts a saturation point. There is after all a limit to the number of school teachers and morticians who can be employed, and the less hopeful who fear the permanent results of transfer are concerned mainly with the increasingly large numbers released, and say it is not possible to absorb them into service industries.

The controversy goes on indefinitely, lacking in finality as to the permanent effects of the displacement of men by machines, because we are lacking in concrete evidence, and because much of the concern is over what is yet to come.

Immediate Effects Tragic

To come now to the temporary results of the unemployment caused by technological changes. No one disputes the immediate effects. It would be foolhardy, as here we are dealing with definite measurable results that have been, in some cases, collected and analyzed. Here we are not dealing with anything as intangible as "benefits to society as a whole." The permanent results must be considered with society as a whole in mind, and the economist is there in his glory when he is considering causes and results, supply and demand over an extended period and wide area. (Some one has remarked that all the equipment necessary to be a teacher of economics is a free and ready use of the words "supply and demand.") Be that as it may, even the economists agree with each other and with those most directly concerned that at least the temporary result of technological changes is unemployment. Here again may we drive home the fact by recourse to definite statistical material. Dr. Lubin, of the Institute of Economics, in a study of 754 workers in three cities, who had lost their positions through technological changes, found the following results: Of the 754 men interviewed, 344 or 45.5 per cent had been unable to find work at all. Of this number, 76 per cent had been unemployed for over two months, 65 per cent for over three months, 41 per cent for over six months, and 19 per cent for over nine months. Of the men who had found work when the study was made, 72 per cent had been unemployed for over two months before work was found. This was not a period of depression in which industry was at a standstill, but at a normal period when production was increasing.

Mr. R. J. Myers, in his study of the cutters released from the Chicago clothing industry because of technological changes, found much the same story. While his research showed that only 11 per cent were still unemployed at the end of the year, yet 33 per cent of those who had found work had been unemployed six months or more. The average time lost between the old job and the new was 5.6 months. Take those figures with you. In this one study, on one trade, in one industry, in one city, out of 370 cutters displaced through technological

[†]Charles Stuart, "Men and Machines".

changes, the average period of unemployment before new jobs were found was 5.6 months. Nor was this in a period of depression. There is your concrete problem that we are asking you to face squarely and consider its ultimate consequences.

When the United States Rubber Company closed down its New Haven plant, 700 rubber workers were laid off. A study was made of the period during which these men remained unemployed. One year had passed from the time when the plant was closed and the study was made. At the end of that year the men who were over 45 years had lost on the average of six months, and 30 per cent of them had not found other work at all. This study serves to emphasize what has become a truism in modern industrial life, that there is no place for the mature worker who is seeking employment. Youth and speed and mechanical devices have forced him out and conspire to keep him unemployed.

In all the studies referred to, several of the men are still unemployed after a year or more, so the results are incomplete. Some may find work in the newer fields that open up but the disastrous effects of six months' or 12 months' unemployment remain.

Adjustments in industry are made so rapidly, machinery is introduced, high cost plants are closed, mergers are arranged, reorganizations take place with so little warning that no time is given the one most vitally concerned to readjust his life and skill accordingly. Even though we grant that in the long run it may be true that introduction of labor saving devices and mass production does not increase the total amount of unemployment, no one questions the fact that this is true only in the long run. There is unquestionably a period after the introduction of most of these new devices when there is an increase in the number of persons unemployed. Time must be allowed for the increased demand to make itself felt and in the meantime there are fewer employed.

Unemployment within employment may occur as a result of these technological changes. That is, men may be laid off while installation of new machinery takes place, or because the supply of goods on hand is greater than the demand in the market. This period of unemployment may be a matter of weeks or months. When Mr. Ford changed his plant to permit the production of Model "A," instead of Model "T," he laid off 60,000 men for an indefinite period. This was technological unemployment. The men were re-employed, but after a year of idleness, savings consumed, debts incurred, morale weakened, and the fear of a repetition haunting them. This situation is one of the inherent weaknesses in our modern efficient mass production. While society boasts of the new efficiency, and you ride in a Model "A," instead of a Model "T," the industrial worker feels his world shifting beneath him—a trade and a job today, a notice of dismissal tomorrow. Excellence of character, skill, industry, are no longer a guarantee of security. However much the worker himself may profit indirectly by the lower prices made possible as a result of mass production, this growing insecurity of employment stalks his footsteps. He must not be left to face the problem alone.



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RADIO

(Continued from page 30)

pending wholly on a common A. C. power system.

It so happens that with the standard radiovision technique of 48-lines, 15 pictures per second, that a predominate scanning frequency of 720 cycles ($48 \times 15 = 720$) is developed. This scanning frequency can be filtered out from the intercepted signal, amplified independently and used to control the speed of the receiving scanning mechanism. For this purpose, the 720 cycle component of the signal is filtered out by a suitable circuit, amplified by an additional tube in the radiovision receiver, and sent to the field of the synchronizing device. This device consists merely of a field or electromagnet, influencing the toothed rotor which is attached to the scanning disc. The rotor or phonic wheel serves to accelerate or retard the scanning disc, driven by standard 60-cycle current, in such a delicate manner that perfect speed is maintained. In other words, the standard 60-cycle current serves to keep the scanning disc approximately in step with that of the transmitting station. All that is required is very slight braking or acceleration to maintain perfect step during each revolution of the scanning disc. This is accomplished by the phonic wheel or rotor of the automatic synchronizing device.

Moves Toward Popular Use

With synchronizing means included in the signal itself, it becomes possible to tune in perfectly synchronized radio pictures, irrespective of a common A. C. power system. This means that the present radiovision broadcasting stations can appeal to a much greater audience than heretofore. Indeed, radiovision makes one more step towards commercial practicability as the result of this automatic synchronizer.

Other important developments have taken place, although for the most part they are in the nature of refinements rather than radical innovations in the radiovision technique. Practically all the workers are concentrating on the 48-line, 15 pictures per second standard, although at least one organization is experimenting with 60 lines, 20 pictures per second.

One important development is in the form of special receiving sets suitable for the peculiar requirements of radiovision. It will be noted that in regular sound broadcast reception, the signal width is less than 10 kilocycles, inasmuch as the broad-

cast area is divided into channels 10 kilocycles wide. In radiovision, however, the channels are 100 kilocycles wide, so that the receiver must be capable of fairly broad tuning in order to include all the side bands of the signals, which are so essential for good pictorial detail. Special receivers have recently been developed. They include the necessary wide tuning, which eliminates regeneration—a factor fatal to good pictures. They are socket power operated and include the necessary power amplification for clear, well-illuminated pictures. Such receivers, in combination with the latest radiovisors, provide fairly simple equipment for the average home living room, and lay-hands.

However, while considerable progress has been made on the technical side, the fact remains that radiovision is still pretty crude. As an experiment, it is mighty interesting, and, we even believe it can be called successful. As a commercial proposition, however, it falls far short of the mark at the present time. It has a certain amount of novelty or curiosity appeal, whereby persons might be induced to purchase radiovision equipment in order to be the first in their community or neighborhood to receive pictures flashed over the air. However, once the novelty wears off, there is relatively little entertainment value to hold the interest of the owner.

Of course, the present method of scanning is exceedingly crude. It is almost impossible to obtain really fine detail with the present technique. Even though we were to multiply the number of lines, we would still fall short of a satisfactory system. Furthermore, multiplying the number of lines entails a great many complications which seem almost insurmountable at the present time.

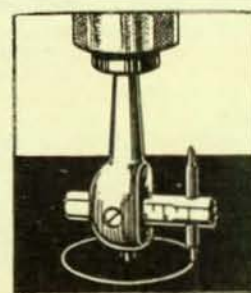
Radiovision broadcasters, for the most part, have failed to show any real degree of good showmanship. They appear to be more in the line of experimenters and broadcasters. Most of their equipment is of a haywire nature, and they are constantly changing their transmitting pick-up facilities. Until they can get down to the basis of real showmanship, as has been done by the sound broadcasters, radiovision, as a commercial proposition, will remain an unreach goal. Technically, there is much hope even with the crude technique now at the disposal of the radiovision workers. Certainly, however, before the thing becomes commercially successful, some entirely new technique will probably be introduced to a startled radiovision world.



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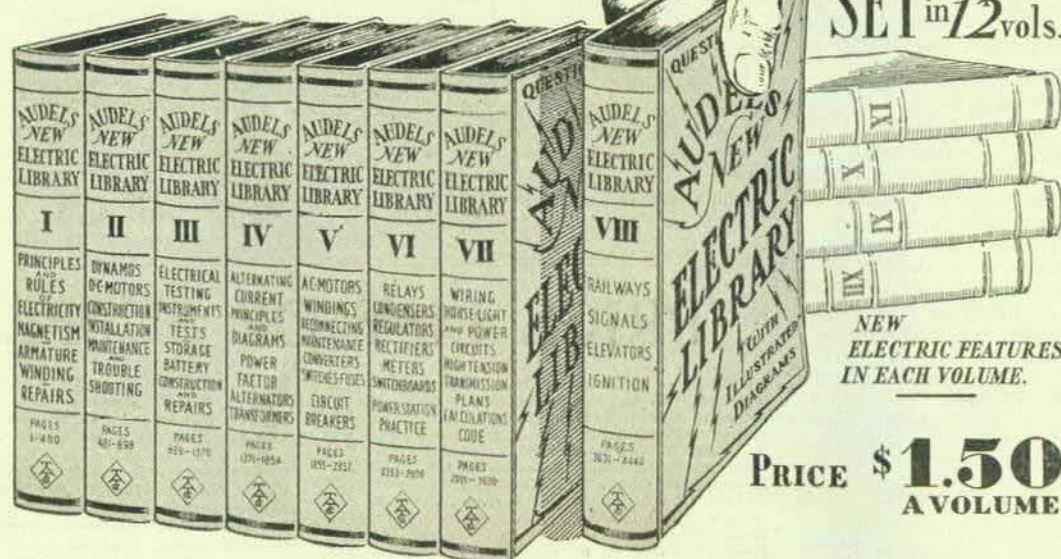
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REVERSAL OF THOUGHT OF ANTI-TRUST LAWS

(Continued from page 9)

ganization," have developed otherwise, so that "there does not seem to appear in sight any man or group of men—in any industry, who are big enough to organize to a point where it would be possible to regularize employment in their industry."

E. P. Schmidt, Marquette University

"The evils of monopoly are not a myth. But it appears that there is something inherent in modern capitalism that makes monopoly inevitable. Everyone recognizes that the railroads, for instance, are inherently monopolistic; a larger number is coming to agree that practically all industries are more or less monopolistic by nature. With this tremendously overdeveloped producing capacity competition tends to wipe out satisfactory return on capital and profits, only to be followed by a movement towards combination. Those concerned with the problem are beginning to wonder if the attempt to stem the forces bringing on monopoly is not entirely futile. This accounts for the fact that monopoly is no longer fought as it was 25 years ago when competition was worshipped more widely as a beneficent guiding hand."

The New Republic

"The anti-trust laws as interpreted by the courts, culminating in this latest injunction, virtually prohibit unions from defending their very existence, so long as the products of their labor are sold in interstate commerce. This is a far cry indeed from the original intention of the voters to protect the consumer from the extortionate profits of monopoly. Labor, so long as the law remains unchanged, and is so enforced, must either surrender or rebel. This is the choice which the judicially aided employer-dictatorship has forced upon the country. Can the federal government afford to risk its prestige upon a lasting submission of the workers?"

Thomas E. Burke, Plumbers

Thomas E. Burke, secretary-treasurer of the United Association Journeymen Plumbers and Steamfitters, speaking at the Catholic Conference on Industrial Problems recently, suggested that industry be allowed to travel a freer road, without political interference. He argued that "nobody knows how to run a business as well as the people in it, and the Sherman Act, and whatever else stands in the way ought to be removed."

ENGINEERS FIND "SCIENTIFIC VALUE" IN UNIONS

(Continued from page 14)

cern and of specialized responsibility within the organization."

16. "Sudden termination of employment, without warning and without financial compensation, is contrary to good practice in employment."

17. "Procedure for making changes among employees should be formulated as part of managerial policy and should have regard for the general objective of security."

18. "If displacement of employees is unavoidable after all the other possibilities have been studied, a compensation wage should be paid as a lump sum or in weekly payments, covering a reasonable maximum period to make it possible for the worker to find another position; the personnel department should assume definite responsibility in co-operation with public employment offices and other agencies to assist the worker in finding other employment."

19. "To secure, develop and maintain a competent working force is the basis of lasting success in an industrial enterprise."

20. "An enterprise should also avoid setting an upper age limit for hiring workers, since this has social consequences for industry as a whole, of much the same character as the separate enterprise encounters in the obligation of retaining older workers."

The committee:

Arthur E. Barter, works manager, The Plimpton Press, Norwood, Mass.

Henry Bruere, first vice president, Bowery Savings Bank.

John M. Carmody, editor, "Factory and Industrial Management"; president, Society of Industrial Engineers.

Morris Llewellyn Cooke (chairman), consulting engineer in management, 1520 Locust St., Philadelphia; past president, Taylor Society.

Gustave Geiges, personnel manager, Gotham Silk Hosiery Co., Inc., Philadelphia; past president, American Federation of Full Fashioned Hosiery Workers.

Lillian M. Gilbreth, consulting industrial engineer, Montclair, N. J.

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H. V. R. Scheel, vice president, Botany Consolidated Mills, Inc., New York.

F. A. Silcox, industrial relations director, New York Employing Printers Association, Inc.

Francis Lee Stuart, consulting engineer, New York; formerly chief engineer, Baltimore and Ohio and Erie Railroads.

Mary van Kleeck, director, Department of Industrial Studies, Russell Sage Foundation, New York.

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L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS				
I. O.	20362	20984	65	199501	199510	165	654600	654608	290	36301	409	201001	201027
1	963718	963737	66	190501	190840	167	628786	628794	290	732596	409	977560	977600
1	132751	132762	66	34501	34502	169	673821	673837	292	5701	410	606355	606360
1	218355	218509	66	299581	299700	170	671957	671969	292	337470	411	608622	608636
1	19521	19570	68	169830	169960	173	23116	23132	293	660573	415	701465	701474
1	2401	2437	69	532701	532704	174	620010	620021	296	977085	416	90870	90905
2	297041	297190	70	659035	659041	175	868593	868614	298	231114	417	249595	249643
3	Series A. 28188-28200		72	958267	958284	178	397464	397479	298	27001	418	229029	229116
3	" A. 28459-28500		73	340405	340491	180	164391	164419	300	966800	418	33001	33007
3	" A. 29660-32676		75	647662	647664	181	194384	194443	301	670634	421	187581	187600
3	" A. 32701-33952		76	103538	103601	183	261632	261651	302	702865	424	615177	615192
3	" A. 34201-34313		76	48001	48003	184	444262	444264	302	25806	424	49501	49505
3	" A. 34501-34561		76	24301		185	219951	220055	303	528236	425	261906	261913
3	" B. 7124-7200		77	24605	24609	186	693582	693600	305	27307	426	700455	700462
3	" B. 7403-7500		77	176100	176250	187	705950	705970	307	680665	427	1288	1373
3	" B. 7548-7957		77	176559	176615	191	259874	259892	308	158718	427	4511	4521
3	" B. 8101-8379		79	302248	302303	193	260608	260653	309	133383	427	134502	134528
3	" B. 8401-8477		80	870808	870835	195	335926	336024	311	116648	428	549332	549365
3	" B. 8701-8871		81	3151	3214	196	960116	960149	312	11418	429	871850	
3	" C. 403-450		82	24601		197	583659	583664	312	62401	429	9901	9975
3	" D. 6699-6900		82	13371	13430	200	24905	25010	313	3661	430	258105	258110
3	" D. 7079-8129		83	187765	188188	204	622924	622982	314	307344	431	989972	989978
3	" D. 8401-8453		83	20701	20731	205	174065	174079	314	13502	432	601874	601876
3	" E. 4851-5038		84	195441	195596	208	191351	191374	315	291204	434	662181	662190
3	" G. 642-656		86	947341	947482	209	206398	206431	317	112524	435	130501	130512
4	647272	647289	86	101251	101269	210	121968	122124	318	682214	435	66701	66770
5	312		87	679141	679160	211	41251	41260	319	114324	440	123668	123680
5	99611	99750	88	720715	720741	211	132751	132800	321	706776	441	703492	703508
5	163501	164030	90	6960	6970	212	91593	91660	322	854675	443	680348	680371
6	64050	64335	90	108104	108196	212	26251	26367	323	2101	446	698786	698813
8	867975	868054	94	690593	690600	212	157072	157171	323	1801	449	24316	24325
10	665501	665529	95	558543	558548	213	178900	179298	323	658083	451	608202	608206
12	800811	800815	96	36564	36644	213	131251	131254	325	37943	453	672730	672735
14	36841	36867	96	18603		213	45001	45030	326	599807	454	696502	696512
15	863798	863810	96	12601	12618	214	996586	996597	328	679021	456	740567	740600
16	671474	671495	99	8791	8940	214	28501	28563	329	22256	456	166501	166512
17	50701	50707	101	574452	574453	214	674423	674432	330	176633	457	759775	759784
17	295381	295950	102	110373	110405	214	167222	167250	332	881714	458	260847	260870
18	210559	210750	104	141501	141630	215	85496	85500	333	192258	460	615808	615813
18	137251	137427	105	135994	136054	215	692101	692117	334	691177	461	102040	102070
18	24301	24307	106	909956	910052	216	833127	833137	335	622511	464	652958	652963
18	14101	14115	107	5526	5544	217	983617	983621	336	636478	464	30001	
20	7501	7524	108	568491	568500	222	108771	108778	338	703774	465	221351	221442
20	112441	112500	108	117001	117026	222	7201	7202	339	902341	466	681934	681968
20	67501	67587	109	648741	648755	222	860785	860809	340	166168	468	666240	666245
20	10501	10594	110	138751	138752	223	27309	27364	341	777658	470	654939	654954
26	162069	162141	110	93001	93124	224	800465	800567	341	30301	471	6937	6956
26	97971	98215	111	259210	259220	225	627070	627090	342	589323	473	621011	621019
27	869017	869025	113	837181	837215	226	705711	705737	343	648400	474	200534	200736
28	103706	103734	114	733722	733727	229	654345	654357	344	23401	477	503977	504000
28	129001	129072	115	64801	64802	230	93778	93833	345	655517	477	29401	29405
28	36001	36071	115	667183	667194	230	36001		347	192042	479	320956	320976
30	598449	598461	116	90816	90872	231	776170	776180	348	189131	480	612479	612499
31	150539	150552	117	692828	692855	232	265391	265414	349	663656	481	1738231	173890
32	596975	596979	119	700173	700180	233	655355	655375	349	123709	481	34201	34202
33	39901		120	224813	224837	235	682725	682744	349	129001	482	615528	615530
34	60001	60020	121	653991	654002	236	661231	661234	351	197276	483	298234	298352
34	747170	747227	122	44704		237	8733	8765	352	153047	488	114879	114980
35	100748	100862	122	230551	230670	238	681273	681294	353	8705	490	80684	80689
35	7508	7511	124	3321	3340	240	857736	857746	353	189270	492	865721	865767
35	33001		124	91881	92142	241	606909	606921	353	102015	493	666552	666552
36	705031	705050	124	2101	2134	242	730415	730425	354	165202	494	17401	17403
37	105248	105322	125	156713	157210	243	138790	138793	355	638554	494	132607	132750
38	24761	24910	125	29701	29708	244	704352	704354	356	653149	494	167251	167691
38	827121	827380	127	857103	857134	245	136903	136986	358	172501	494	35701	35828
38	827601	828350	129	314561	314571	246	189853	189904	358	862007	497	204001	204006
38	4241	4330	130	128321	128570	247	604370	604404	358	9301	497	639149	639150
39	92414	92610	131	39001	39105	248	671844	671870	363	105893	497	51001	
39	16201	16205	131	26701	26725	249	634236	634240	365	822308	500	262278	262326
40	23103	23112	132	691772	691778	251	694941	694956	366	635078	500	21313	
40	172343	172500	133	316222	316242	252	149450	149471	368	259575	501	199278	199500
40	135001	135047	135	859379	859395	254	98925	98943	369	163065	501	171751	171949
40	3000												

L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS		
544	195751	195757	642	13801	13803	817	146271	146493	1105	658160	658175
544	41401	41410	646	820510	820511	817	127505	127516	1108	22820	22835
544	867303	867350	648	97981	98126	820	591547	591550	1131	994472	994480
545	25801	25824	649	216914	216940	820	50402	50406	1135	614120	614125
545	15301	15302	651	711195	711209	828	703183	703186	1135	64203	
547	655843	655851	653	261351	261410	832	677929	677937	1141	20401	20402
548	618659	618667	654	2409	2415	835	841040	841050	1141	367	408
551	290943	290958	656	668521	668547	838	680975	681000	1141	21903	21906
552	95263	95282	660	679931	679973	840	664731	664745	1147	30908	30935
556	339508	339532	660	8450	8473	842	624868	624872	1151	459877	459880
557	692441	692462	664	667594	667619	850	32701	32702	1154	30903	30904
558	36266	36269	665	555517	555562	850	746081	746123	1154	323151	323171
559	610285	610294	666	105805	105850	850	14401	14403	1156	131302	131360
560	356841	356860	668	74376	74408	854	204806	204831			
560	2702		669	921697	921717	855	3936	3954			
560	5121	5140	670	175754	175764	857	683642	683653			
560	22501	22504	672	676715	676728	862	11701	11713			
561	30426	30577	675	32839	32843	862	619894	619900			
564	740730	740731	677	122392	122427	863	702076	702099			
564	27001	27002	677	20101	20103	864	946639	946690			
565	902792	902808	678	24018	24020	865	98949	99000			
567	19801		679	650104	650114	865	114001	114062			
567	118631	118685	680	706112	706113	869	546599	546610			
568	199596	199842	681	458064	458073	870	794504	794547			
569	23402		683	4831	4850	874	664175	664183			
569	21601	21605	683	16503	16504	875	625258	625267			
569	81731	81750	685	697042	697060	886	259406	259421			
569	135751	135881	686	30791	30803	890	706380	706385			
570	15920	15939	688	18526	18544	892	651741	651760			
571	632829	632850	691	690452	690471	902	543738	543750			
571	32401	32410	694	128407	128508	902	31501	31511			
572	263150	263161	695	717090	717114	907	38971	38976			
575	382492	382500	697	168639	168709	912	122255	122335			
575	9601	9613	701	812269		912	6005	6008			
578	34337	34527	702	33901	33908	915	971337	971348			
578	2405	2418	702	338776	338999	918	704741	704760			
580	642727	642734	704	212328	212362	919	59296	59300			
581	9481	9550	707	294716	294750	922	613772	613776			
583	882961	883016	707	18001	18002	940	669598	669612			
584	57751	57754	711	213277	213381	943	669230	669235			
584	140251	140258	712	497720	497749	948	12924	12958			
584	96287	96401	713	3001		948	188236	188274			
584	210856	210981	713	182271	183000	948	31514	31527			
585	721299	721314	713	183001	183330	953	134207	134228			
586	667056	667069	716	124001	124230	956	632901	632907			
588	823701	823749	716	1508	1532	958	657263	657268			
591	695654	695662	716	26402	26406	963	88586	88590			
592	263719		717	222271	222337	968	869545	869548			
593	35985	36000	717	9601	9602	969	634126	634136			
594	691530	691540	719	441592	441620	971	443068	443072			
595	211679	211841	722	978273	978300	978	326051	326076			
595	45901	45903	722	15901	15903	982	439138	439144			
596	440470	440480	728	949418	949431	987	976390	976394			
598	664455	664460	731	460192	460213	991	677043	677046			
599	924578	924592	732	26703	26704	995	639798	639809			
600	1514	1538	732	125524	125565	1002	59675	59748			
600	1227	1234	732	1805	1806	1012	668927	668928			
601	564506	564526	734	140004	140102	1021	970722				
602	536208	536225	735	670899	670909	1024	118086	118132			
603	620742	620752	743	1903	1928	1025	973055	973059			
607	600861	600870	743	1510	1511	1029	789702	789721			
611	142564	142604	747	263451	263456	1032	767923	767936			
613	119635	119731	757	697396	697400	1036	445943	445973			
617	99781	99825	757	31801	31823	1037	129751	129788			
618	20410	20411	759	262520	262527	1037	19671	19780			
618	22520		762	9016	9040	1042	673148	673150			
619	675357	675370	763	26112	26131	1045	280103	280105			
623	90058	90080	770	3307	3333	1047	168751	168774			
623	25501	25505	771	330565	330567	1054	733181	733190			
627	852560	852574	772	702263	702267	1072	858486	858516			
629	860481	860563	774	799466	799493	1086	24901	24949			
630	334222	334238	784	885311	885350	1086	29401	29409			
631	944834	944854	787	916171	916184	1086	699762	699790			
636	42901		792	707055	707066	1087	681271	681279			
636	123001	123040	794	892023	892063	1091	350894	350917			
636	230986	231000	798	954489	954502	1099	787419	787436			
640	33443	33490	802	674763	674774	1099	14101	14102			
642	141845	141871	811	968062	968066	1101	341564	341578			

L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS
1105	658160	658175	98	143974	144166				
1108	22820	22835		144169					
1131	994472	994480	99	8875	8887-8888				
1135	614120	614125	124	2120	2127				
1135	64203		164	196979-980	197121-130				
1141	20401	20402		191	259876				
1141	367	408		223	27360				
1141	21903	21906		230	93781-93784				
1147	30908	30935		245	136921-930				
1151	459877	459880		259	913805				
1154	30903	30904		269	125008				
1154	323151	323171		271	73748				
1156	131302	131360		275	32252	255			
				292	337470-480				
				301	670638				
				313	3667				
				321	706781				
				323	1801	2111	975300		
					853334-350	597745-750			
				332	881726	731-740			
				336	636478	484-485			
				340	166210				
				347	192059				
				349	129044	057			
				375	382494				
				393	162230				
				417	249606	611-620			
				418	229050				
				427	134500				
				429	9910				
				443	680348	350-357			
					361-362				
				446	698794	796			
				466	681966				
				501	171798				
				528	102825				
				537	168875				
				540	6070				
				560	5130				
				578	2410				
				584	96346	96374			
					210977				
				613	119636				
				618	20410				
				648	98046	98111			
				653	261403				
				702	338842				
				707	294736	747-750			
				732	125528				
				865	114009				
				890	706383				
				915	971540				
				978	326056	061			
				1036	445963				

MISSING	
1	218351-354
14	36857
39	16202-16203
161	12622
321	706780
523	673551-700
540	6060
584	96301-96310
585	721301-310
660	679930
713	182251-270
743	1507-1509
832	677927-928
1047	430500
1086	699781-784

VOID	
1	218429
3	Series A. 28464
	29715
	29798
	29907
	29953
	29963
	30331
	30748
	30943
	31013
	31246
	31335
	31382

SEATTLE FINISHES WORLD'S HIGHEST ARCH DAM

(Continued from page 15)

It contains 350,000 cubic yards of concrete and is 60 feet wide and 160 feet thick at the bottom, tapering to 18 feet thick and 1,200 feet long measured on the crest. Spillways are provided at each end to care for a flow of 100,000 cubic feet per second, an unprecedented flood, and are fitted with Tainter gates to raise the reservoir 18 feet above the spillway crest. Like the Gorge plant, Diablo depends on the stream flow until the Ruby Reservoir is completed. Diablo Dam stores 90,000 acre feet, which gives regulation over a period of days for both Diablo and Gorge plants.

Seattle Takes Much Power

The third unit of the Skagit development will be Ruby Dam and power plant located seven miles upstream from Diablo Dam at the head of Diablo Reservoir. Work must

begin on this unit as soon as Diablo Power House is done, for the power demand is doubling every five and one-half years. Ruby Dam will be 620 feet high and 1,200 feet long on the crest, built into a solid granite canyon that rises thousands of feet above the dam on both sides. This dam will be 200 feet higher than any yet built and compares in height with Boulder Dam on the Colorado River. It will back the waters up 34 miles, creating a reservoir of three million acre feet, larger than Lake Washington. This is enough to equalize the entire flow of the river not only over a dry season but over a period of years so that it may all be conserved for power. It will also control all floods which have created hundreds of thousands of dollars' worth of damage in the past.

Ruby Power House will be located immediately below the dam and will contain generators of a total capacity of 480,000 horse-power. After Ruby Reservoir is filled, the Diablo plant can be extended to its full size of 320,000 horse-power, and Gorge Dam

will be raised and Gorge plant extended to its full size of 320,000 horse-power.

Current is carried to Seattle from Gorge plant 100 miles on a single circuit transmission line of 165,000 volts. Eventually six or eight high-voltage lines will be brought from the entire project to Seattle by various routes, each line operating independently of the others so that interruption on one line will not affect the others.

The entire project is estimated to cost only \$65 per horse-power delivered in Seattle, making it one of the cheapest hydro-electric developments in America. The character of the work, which is all in solid granite, will assure an absolutely permanent development which will supply energy to the industries and homes of Seattle for many generations.

It is a grand gift to say the right thing at the proper time, but far more difficult is it to leave unsaid the wrong thing at the tempting time.

PREVIOUSLY LISTED MISSING—RECEIVED

82—13346-13367.
225—627041, 055.
323—975300, 853334-350,
597745-750.
436—676111-120.
461—102028-038.
521—720810.
548—618648-656.
618—22502, 22510, 22518,
627—852541-550.
787—916168.

BLANK

325—37995.
581—9546-9550.
618—22502, 22510-22518,
713—182594-183000.

TOOLS OF ANOTHER KIND

IN THE TRADE, ELECTRICAL SCIENCE COMES FIRST.

Men must know.
Skill rests on science.

* * *

AFTER SCIENCE, COMES TOOLS.

No electrical worker has opposed the entrance of mechanized implements into the industry.
Tools save time: advance the craft, and do not abolish science.

* * *

RESEARCH IS A NEW SORT OF TOOL.

It is another way of advancing the objective of the union.
More than a score of key cities have adopted the research plan of the Brotherhood.

* * *

RESEARCH DEMANDS EFFECTIVE TOOLS.

The weekly research cards, and the research ledgers prepared by the I. O. are tools in the aid of research.

* * *

LIFETIME LOOSE-LEAF FULL LEATHER RESEARCH BINDERS WITH TABS ARE PRICED AT \$15.

Research ledger sheets are priced at \$2.50 a hundred. One sheet serves a member a year.

Research weekly report cards are 50 cents a hundred.

* * *

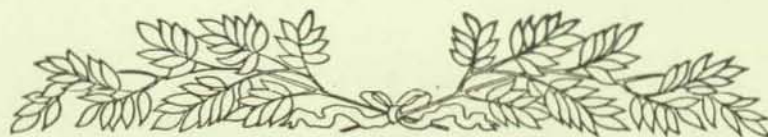
RESEARCH, LIKE A GOOD ENGINE, GAINS SMOOTHNESS AND POWER WITH USE.

Statistics gathered accurately and preserved carefully over periods of time will serve the union powerfully.

The union cannot ignore this new tool of organization work.

* * *

G. M. BUGNIAZET, Secretary
International Brotherhood of Electrical Workers
1200 15th St., N. W.
Washington, D. C.



MAUDLIN SENTIMENT ASIDE,
THE NEW YEAR MAY BRING
A MENTAL INVENTORY. A
WEIGHING OF INTANGIBLE ASSETS
AND LIABILITIES SUGGESTS THAT
LABOR MAY HOPE BECAUSE LABOR
HAS FOUND A KEY. THE KEY TO
POWER IS INTENSIVE CO-OPERATION.
UNLIMITED IN ITS POTENTIALITIES
IS HUMAN CO-OPERATION AS A WAY
OF LIFE. A LABOR UNION IS AS
STRONG AS ITS MEMBERS WILL IT
TO BE.

